```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum
Maximum
                                                                                                                                                                                                                                                                                                Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tota
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           earched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0n:
  -processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      size
                                                                                                                                                                                                                                                                                                                                                  Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  numbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       score
                                                                                                                                                                                                                                                                                                 Scor
                                                                                                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ
                                                                                                                                                                                                                                                                                                                                                  No. is the greater to greater to the second terms of the second te
  nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  щ
                                                                                                                                                                                                                                                                                                                                                                                          187
2: 3: 4: 5: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OLIGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US
53
                                                                                                                                                                                                                                                                                                Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  þ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         824507
  Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gatccatggacaaat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyright
                                                                                                                                                                                                                                                                                                                                                                                        ssued_Patents_NA:*
/cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                        .sued
                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                                                                              \Box
    γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               search,
                                                                                                                                                                                                                                                                                                                                                               han
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  O)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  atis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  857-
                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                  number of r
an or equal
y analysis c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
   7771
7772
7792
1300
1300
1300
1300
1300
1300
1301
1311
1311
1311
1311
1311
1311
1311
1311
1311
1311
1311
1311
1311
1311
1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore
(c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              using
                                                                                                                                                                                                                                                                                                  D
                                                                                                                                                                                                                                                                                                                                                                       of
   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ū
US-08-875-233-5
US-08-875-233-14
US-08-875-233-14
US-08-975-233-14
US-08-488-031-14
US-08-488-027-14
US-08-482-658-14
US-08-470-349-14
US-08-475-610-14
PCT-US92-00277-14
PCT-US92-00278-11
US-08-488-031-11
US-08-488-027-11
US-08-488-027-11
US-08-482-658-11
US-08-482-658-11
US-08-482-658-11
US-08-482-658-11
US-08-470-349-11
US-08-470-349-11
US-08-475-610-11
PCT-US92-00278-11
US-08-475-610-11
PCT-US92-00278-11
US-08-475-610-11
PCT-US92-00278-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cho
                                                                                                                                                                                                                                                                                                                                                  results l to the of the t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ctgaa
                                                                                                                                                                                                                                                                                                 IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              summari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07:02:5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60.
                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             version
- 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                  s predicted by
e score of the
total score di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ramet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Search (without a 697.626 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gtcgtaaccgtcgacgagct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ch time 54 Se
it alignments)
Million cell
                                                                                                                                                                                                                                                                                                                                                   by chance to have the result being point on the contraction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1649014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell
                                                                                                                                                                                                                                                                                                 Descripti
 Sequence
                                                                                                                                                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       updates/sec
                                                                                                                                                                                                                                                                                                                                                                       have
                                                                                                                                                                                                                                                                                                                                                              printed,
                                                                                                                                                                                                                                                                                                  Ġ
H
   Ø
Appli
```

45 84.9 152 2 US-08-488-027-9 45 84.9 152 2 US-08-488-027-9 45 84.9 152 2 US-08-482-663-9 45 84.9 152 3 US-08-482-658-9 45 84.9 152 3 US-08-470-349-9 45 84.9 152 3 US-08-470-349-9 45 84.9 154 1 US-08-090-193-13 45 84.9 154 2 US-08-488-031-13 45 84.9 154 2 US-08-488-027-13 45 84.9 154 2 US-08-488-027-13 45 84.9 154 3 US-08-482-658-13 45 84.9 154 3 US-08-482-658-13 45 84.9 154 3 US-08-470-349-13 45 84.9 154 3 US-08-470-349-13 45 84.9 154 3 US-08-470-349-13 45 84.9 154 5 PCT-US92-00277-13	45	44	43	42	41	40	39	38	37	36	ა წ	34	ω u	3 2	31	30	29	82
4.9 152 2 US-08-488-027-9 4.9 152 2 US-08-090-192-9 4.9 152 2 US-08-482-663-9 4.9 152 3 US-08-482-658-9 4.9 152 3 US-08-475-610-9 4.9 152 3 US-08-475-610-9 4.9 154 2 US-08-488-031-13 4.9 154 2 US-08-488-027-13 4.9 154 2 US-08-488-027-13 4.9 154 2 US-08-488-027-13 4.9 154 3 US-08-482-663-13 4.9 154 3 US-08-482-658-13 4.9 154 3 US-08-475-610-13 4.9 154 3 US-08-475-610-13	45	45	45	45	45	45	45	45	45	45	45	45	<b>4</b> 5	45	<b>4</b> 5	<b>4</b> 5	45	45
52 2 US-08-488-027-9 52 2 US-08-490-192-9 52 2 US-08-482-663-9 52 3 US-08-482-658-9 52 3 US-08-475-610-9 52 3 US-08-475-610-9 52 1 US-08-488-0277-9 54 2 US-08-488-027-13 54 2 US-08-488-027-13 54 2 US-08-488-027-13 54 3 US-08-482-663-13 54 3 US-08-475-610-13 54 5 PCT-US92-00277-1	4.	4.	4.	4.	4.	4.	4.	4.	4	4	4.	4	4.	4.	4.	4.	4.	·
US-08-488-027-9 US-08-488-027-9 US-08-482-663-9 US-08-482-658-9 US-08-470-349-9 US-08-475-610-9 PCT-US92-00277-9 US-08-488-031-13 US-08-488-027-13 US-08-488-027-13 US-08-482-663-13 US-08-482-663-13 US-08-470-349-13 US-08-475-610-13 PCT-US92-00277-1	່ທ	ū	ហ	U	ហ	ថា	ហ	ហ	ហ	S	ហ	ហ	ហ	ហ	ហ	ហ	ហ	U
S-08-488-027-9 S-08-482-663-9 S-08-482-658-9 S-08-475-610-9 S-08-488-0277-9 S-08-488-0277-9 S-08-488-0277-3 S-08-488-027-13 S-08-488-027-13 S-08-482-653-13 S-08-482-653-13 S-08-482-653-13 S-08-482-653-13 S-08-482-653-13 S-08-482-653-13 S-08-482-653-13	ហ	w	w	w	N	N	N	N	N	سا	ഗ	w	W	w	N	Ŋ	ผ	٨
	CT-US92-00277-1	S-08-475-610-1	S-08-470-349-1	S-08-482-658-1	S-08-482-663-1	S-08-090-192-1	S-08-488-027-1	S-08-486-569-1	S-08-488-031-1	S-08-090-193-1	CT-US92-00277-	S-08-475-610-	S-08-470-349-	S-08-482-658-	-08-482-663-	-08-090-192-	-08-488-027-	- COC-001-00
	13,						13,	13,	13,	13,		9	•	9	9	9	9	-
	Appl	Appl	Appl	Appl	Appl	Appl	Appl	$\boldsymbol{\sigma}$	$\boldsymbol{\sigma}$	סי	_	Appli	Appli	Appli	Appli	Appli		1777

ALIGNMENTS

```
RESULT 2
US-08-875-233
; Sequence 14
; Patent No.
; GENERAL IN
ؠؙ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-
                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 772 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Ma
Best Loc
Matches
                                                         Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                      APPLICANT: Boeshore, Maury L
APPLICANT: Tricoli, David M
APPLICANT: Tricoli, David M
APPLICANT: Reynolds, John F
APPLICANT: Carney, Kim J
TITLE OF INVENTION: Cucumber Mosaic
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow & Kat:
STREET: 2 prudential plaza, 180 N
CITY: Chicago
STATE: 1llinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMINICATION INFORMATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                         08-875-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
18-875-233-5
                                                                                                                                                                                 MOLECULE TYPE: c
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
                                                                                                                                            INDIVIDUAL FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                          LOCATION: 875-233-14
                                                                     Local
                                                                                                                                  NAME,
                                                                                                                                                                      ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     233-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                   /KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 n 86.8%;
Similarity 100.0%;
46; Conservative
                                                        h 86.8 Similarity 100. 46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Applicat 6127601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cucumber ISOLATE:
                                                                                                                     CDS
                                                                                                                        660
                                                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          noi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product= "COAT
/gene= "CP"
/number= 1
/standard_name=
                                                                                                                                                          Mosaic
A35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08875233
                                                                                  88
                                                                   04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                    Score 46; Pred. No. 5.

O; Mismatches
                                                          0;
                                                                                                                                                                      Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 46; DB 3; L
Pred. No. 5.9e-16;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 & Kat:
                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROTEIN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COAT
                                                                     5.5
                                                                       .9e-
                                                          Ø
                                                                                  ب
د
                                                                                                                                                                                                                                                                                                                                                                                                                      #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROTEIN"
                                                          0 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rains
                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           771;
                                                                                   772;
                                   49
            46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
``
                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                          Gaps
                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 3
US-08-875-2
; Sequence
; Patent No
; GENERAL
                                                                                                                                      RESULT 4
US-08-090-:
                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                Ş
                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                             Query Match
Best Local s
Matches 46
                                                                                        Sequence
Patent No
GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 792 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: McMaster, J. Russell
APPLICANT: Tricoli, David M
APPLICANT: Reynolds, John F
APPLICANT: Carney, Kim J
TITLE OF INVENTION: Plants Resistant
TITLE OF INVENTION: Cucumber Mosaic
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow & Katz
STREET: 2 Prudential Plaza, 180 N.
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
CLASSIFICATION: 800
ATTORNEY/ACENT INCOMMENT
                                                                                                                                                                                                                                                                                                                          -08-
                                            APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                   ORGANISM:
STRAIN: v
FEATURE:
   APPLIC
TITLE
NUMBER
                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: CUCUMBER MOSAIC VIRUS
STRAIN: v-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Lisa V. Mueller TELECOMMUNICATION INFORMATION: TELEPHONE: 312-616-5400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLI
                                                                                                                                                                                                                                                                                                                        NAME/KEY:
LOCATION:
-875-233-3
CANT: Haseloff, James
CANT: Brand, Andrea
CANT: Perrimon, No. 5641673bert
CANT: Goodman, Howard M.
OF INVENTION: Cell Ablation Using
R OF SEQUENCES: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3, Application US/08875233
o. 6127601
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             233-3
                                                                                         14, Application US/08090193
5.5641673
INFORMATION:
                                                                                                                                                                                                                                                               46;
                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                             Similarity 100.0%; 6; Conservative
                                                                                                                                                                                                    CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                      CDS
3..660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plants Resistant
Cucumber Mosaic 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/875,233
                                                                                                                                                                                                                                                             Score 46; DB; Pred. No. 5.9
                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             & Katz, Ltd.
180 N. Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        t to C
Virus
                                                                                                                                                                                                                                                           DB 3; LL.
5.9e-16;
0;
                  Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strains
                                                                                                                                                                                                                                                                                            Length 792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suite 4700
                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0£
                    Ribozymes
                                                                                                                                                                                                                                                              °.
                                                                                                                                                                                                                                                                Gape
```

0;

CORRESPONDENCE

SSEE:

ADDRESSI STREET: CITY: 1

1100

Sterne, nc. ADDRESS:

Kessler, Go ork Avenue,

Goldstein & , Suite 600

Fox

Washington

```
RESULT 5
US-08-488-031-14
                                                                                                                                                                                                                                                                                                                                                                                                  გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Vers
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/090,193
FILING DATE: 23-DEC-1993
CLASSIFICATION: 514
PRIOR APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609.3080001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2640
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                               Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -80
      COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, V

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/488,031

FILING DATE: 07-JUN-1995

PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                     GENERAL
                                                                                                                                                                                APPLICANT: Brand, And APPLICANT: Perrimon, APPLICANT: Goodman, 1 TITLE OF INVENTION: (NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS ADDRESSEE: Sterne,
                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: h-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: U. COUNTRY: U. 7TP: 20005
                                                                                                                    STREET: 1100 New CITY: Washington STATE: D.C. COUNTRY: U.S.A. ZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -060
                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                    14, Apr. 10. 5849548
                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                           Ň
                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
45; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                   ហ
                                                                                                                                                        Washington
                                                                                                                                                                                                                                                                                                                                                                          D.C.
                                                                                                                                                                                                                                                                                                           Application
                                                                                                                                                                       3: Sterne, Ker
1100 New York
                                                                                                                                                                                                                               Haseloff, James
Brand, Andrea
Perrimon, No. !
Goodman, Howard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A.
US/08/488,031
07-JUN-1995
ON DATA:
                                                                                                                                                                                                ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     both
                                                                                                                                                                                                                     , Howard
                                                                                                                                                                                                                                                                                                                                                                                                                         84.9%;
100.0%;
tive (
                                                                                                                                                                      Kessler, Goork Avenue,
                                                                                                                                                                                                           56
                                                                                                                                                                                                                                                                        James
                                                                                                                                                                                                                                                                                                             US/08488031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33,851
RR: 0609.3080001
                                                                                                                                                                                                                                               5849548bert
                                                                                                                                                                                                                       Ablation
                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 45;
Pred. No.
                                                                                                                                                                     Goldstein & Fo
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatche
                                                                                                                                                                                                                       Using
                                                                                                                                                                                                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Version
                                                       Version
                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; I
2.3e-15;
                                                                                                                                                                                                                       Trans-Splicing
                                                                                                                                                                    Fox
te 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1
                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                   49
                                                                                                                                                                                                                                                                                                                                                                            96
                                                                                                                                                                                                                       Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
Patent No
                                                                                                                       CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/486,56
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/002
FILING DATE: 16-JAN-1992
                                                                                                                                                                                                                                                 ADDRESSEE: Sterne, Kessler, Goldst
STREET: 1100 New York Avenue, N.W
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-488-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPI
FILI
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                            NUMBE
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3080006/MAC/LBB
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLI(
                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
TOPOLOGY: lir
488-031-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LING DATE: 23-DEC-1
R APPLICATION DATA:
PLICATION NUMBER: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NO. 5005
L INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                     ICANT: Haseloff, James
ICANT: Brand, Andrea
ICANT: Perrimon, No. 58
ICANT: Goodman, Howard I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         569-14
14, AI
10, 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CANT:
                                                                                                                                                                                ING DATE: 07-JUN-1995
APPLICATION DATA:
LICATION NITHER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTH:
                                                                                                                                                                                                                                                                                                                                                                                                            R OF SEQUENCES: 5
SPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LICATION NUMBER: 08/090,193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 84.9%;
Similarity 100.0%;
45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/084865
863774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                    Sterne, Kessing,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                base
                                                                                                                         UMBER: PCT/US92/00277
16-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pase pairs
; acid
both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No. 5863774bert
                                                                                                                                                                                                                                                                                                                                                                                                                           56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT/US92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                                       cd M.
Ablation Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07/642,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 45;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0609.3080002/MAC/LBB
                                                                                                                                                                                                                                                      #1.0,
                                                                                                                                                                                                                                                                                                                                                                                  Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                N.W.,
                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2; I
2.3e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Trans-Splicing Ribozymes
                                                                                                                                                                                                                                                       #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

ranger and the company of the experimental and the state of the company of the co

```
SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
US-08-488-027-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Ma
Best Loc
Matches
                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 14
Patent No.
                                                                                                                                     -80-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -80-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX:
INFORMATION F
SEQUENCE CH
                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME DISCRIPTION
                                                                                                                                                                                                                                                      NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
                                                                                                                                                                                                                                                                   TELEFAX: (;
INFORMATION FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                              LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
3-488-027-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DAPPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS
SOFTWARE: PatentIn Release
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           486-569-
                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic ac
STRANDEDNESS: bo
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match
                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52
                                         45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    45
  ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1, Application 5866384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  XX: (202) 371-25
ON FOR SEQ ID NO:
CHARACTERISTICS
                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
  CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : Sterne, Kei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Brand, And
Perrimon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goodman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                84.9%;
larity 100.0%;
Conservative
                                              Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 base pairs
ic acid
both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy urung Flopp
                                        84.9%;
:y 100.0%;
ervative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ef, James
Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Howard
Cell Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sn,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kessler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/488,027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /0848802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ablation Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5866384bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>0</u>
                                                             Score '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 45;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goldstein & Fo, N.W., Suite
                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                              3080003/MAC/LBB
                                                                                      45;
                                                                No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2; I
2.3e-15;
                                                                DB 2
2.3e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Trans-Spli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fox
ce 600
                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #1.25
                                            .15
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                      Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130;
49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ribozymes
                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>,,</u>
                                         Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                           <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
```

```
RESULT 8
US-08-090-1
; Sequence
; Patent No
; GENERAL
                                                                                                                                                                                                                                                                                                                                                     RESULT 9
US-08-482-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  us-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 07/642
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: both
                                                                                                                                                                                                                                                                                                        Sequence
Patent No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                              GENERAL
APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -060-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER (
CORRESPO
ADDRES
STREET
CITY:
STATE:
COUNTY
                                                                                                                                             APPLIC
APPLIC
APPLIC
TITLE
NUMBER
                                                                                                  CORRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLI
PLICANT: Haselor, PLICANT: Haselor, No. 5882907bert
PLICANT: Brand, Andrea
PLICANT: Perrimon, No. 5882907bert
PLICANT: Goodman, Howard M.
PLICANT: Goodman, No. 5882907bert
PLICANT: Goodman, No. 5882907bert
PLICANT: Haselor, No. 588290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                 STRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THICANT: Goodman, Howard M.

TLE OF INVENTION: Trans-Splicing Ribozymes
TBER OF SEQUENCES: 51

TRESPONDENCE ADDRESS:

DDRESSEE: Sterm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESSEE: Sterne
EET: 1100 New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  192-14
                                                                                                                                                                                                                                                                                                        14, Application US/08482663
>. 5882907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52
                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14, Application US/08090192
). 5874414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D.C.
U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84.9%;
larity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sterne, Kessall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0609.3030001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 45; DB 2; Li
Pred. No. 2.3e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goldstein &
e, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96
                                                                                                                                                                          Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

. 0

```
RESULT 10
US-08-482-658-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-482-663-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (2)
INFORMATION FOR (
SEQUENCE CHARA)
                                                             STALL.
COUNTRY: U.S...
ZIP: 20005
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
Talease #1.0,
                                                                                                                                                                                                                                                                                                                                                       atent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/482,663
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                           GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Bugaisky, Lawrence B. REGISTRATION NUMBER: 35,086 REFERENCE/DOCKET NUMBER: 0609 TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 371-2600 TELEFAX: (202) 371-2540 INFORMATION FOR SEQUENCE CHARACTERISTICS:
            COMPUTER: IBM PC compation operating system: pc-Dos software: patentin Releaderent APPLICATION DATA:
APPLICATION NUMBER: US/GETLING DATE: 07-JUN-1991PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy d:
                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                   NUMBER
                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRES
ADDRESSEE: Sterne
                                                                                                                                                                                                                                                           AFFLICANT: Goodman, TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                           STREET:
CITY: V
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 130 base pairs TYPE: nucleic acid STRANDEDNESS: both TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                        14, Application US/08482658
). 6010904
                                                                                                                                                                                                                                                                                                                                                                                                                                               52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 100.0%;
15; Conservative
                                                                                                                                                                                       Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGGACAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                          1100 New
                                                                                                                                                                                                                                                                                          Perrimon,
                                                                                                                                                                                                                                                                                                           Brand, Andrea
                                                                                                                                                                                                                                                                                                                           Haseloff,
                                                                                                                                                                                                  Sterne, No.
NUMBER:
                                                                                                                                                                                                                                       ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MBER: US/08/482,663
07-JUN-1995
                          MBER: US/08/482,658
07-JUN-1995
                                                                                                                                                                                                                                                               Howard M.
Cell Ablation
                                                                                                                                                                                                                                                                                            No.
                                                                                                                                                                                                                                                    <u>ი</u>
                                                                                                                                                                                                                       Kessler,
                                                                                                                                                                                                                                                                                                                          James
08/090,193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35,086
                                                                                                                                                                                                         Avenue,
                                                                                                                                                                                                                                                                                            6010904bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0609.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 45;
Pred. No.
                                                                                                                                                                                                      Goldstein
e, N.W., Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ore 45; DB 2; L
ced. No. 2.3e-15;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   °
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3080005/MAC/LBB
                                                                                                                                                                                                                                                                Using
                                                                       Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                                                                                                                                                         in & Fo
                                                                                                                                                                                                                                                                 Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49
                                                                                                                                                                                                                                                                                                                                                                                                                                             96
                                                                                                                                                                                                                                                                  Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 11
US-08-470-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-482-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3080008
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,192
FILING DATE: 11-NOV-1993
APPLICATION NUMBER: PCT/ US 92/00278
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,333
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609.3030001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL
APPLIC
                 TELI
INFORMAT
                                                                                                                                                                                                                                                                                                                     ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                             CURRENT APPLICATION D
APPLICATION NUMBER:
FILING DATE: 06-JU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Trans-Splicing Ribozymes
NUMBER OF SEQUENCES: 51
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 130 base pairs TYPE: nucleic acid STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                TION |
  NCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             658-14
                                                                                                                                                                                                                                                                                                              NT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1, Application US/08470349 6015794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n 84.9%;
Similarity 100.0%;
15; Conservative
X: (202) 371-2540
N FOR SEQ ID NO:
CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Washington D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sterne, Kessler, G
1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                   U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                              MBER: US/08/470,349
06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kessler,
                              2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              James
                                                                            0609.3030001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 45; LL
Pred. No. 2.3
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0609.3080008/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goldstein &
e, Suite 600
                                                                                                                                                                                                                                                                                                                             Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3; uc
2.3e-15;
2.3 (0;
                                                                                                                                                                                                                                                                                                                             #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
```

0 ,.

-8n

```
SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
US-08-475-610-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
9
                      $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1 Patent No.
                                             Query Match
Best Local S
Matches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -08-
                                                                                               -80-
                                                                                                                                                                                                                                                 COUNTRY: U.S.A.
ZIP: 20005

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Volument Application DATA:
Application NUMBER: US/08/475,610
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: BURGASENEY LAWRENCE R
                                                                                                                                                        TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Perrimon,
APPLICANT: Goodman, F
TITLE OF INVENTION: O
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                       NAME: Bugaisky, Lawrence B. REGISTRATION NUMBER: 35,086 REFERENCE/DOCKET NUMBER: 06 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic a STRANDEDNESS: b TOPOLOGY: both 470-349-14
                                                                                             LENGTH: 130 b
TYPE: nucleic
STRANDEDNESS:
TOPOLOGY: lin
475-610-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45;
                                               Simi
45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             បា
                       ហ
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4, Application 6071730
                                                                                                                  nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84.9%;
imilarity 100.0%;
Conservative
CATGGA
               CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WATION.
Haseloff, James
Brand, Andrea
Brand, No. 6071730bert
Perrimon, No. 6071730bert
Perriman, Howard M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : Sterne, Kessler, G
1100 New York Avenue,
                                              ilarity
Conserv
                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   base
   CAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ase pairs
acid
both
                                                 rvat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cell Ablation
56
                                               84.9%;
100.0%;
tive (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/0847561
                                                                                                                                                                                                                                                                                                                    PCT/US92/00277
                                                                                                                                                                                                                  35,086
ER: 0609.
                                                                                                                                                                        14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 45; DB Pred. No. 2.3 0; Mismatches
                                               Score 45;
Pred. No.
0; Mismato
                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goldstein & F
                                                                                                                                                                                                                                                                                                                                                                                          610
                                                                                                                                                                                                                      3080004/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Using
                                               45; DB 3; I
No. 2.3e-15;
matches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 3;
2.3e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fox
:e 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                      Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49
                         49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
•
                                                 o
,-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
,.
                                                 0
```

```
Sequence 14, Application PC/TUS92002/0
GENERAL INFORMATION:
APPLICANT: Haseloff, James
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Trans-Splicing Ribozymes
NUMBER OF SEQUENCES: 51
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein & Fox
STREET: 1225 Connecticut Avenue, N.W., Suite
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
PCT-US92-00
; Sequence
; GENERAL
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                       RESULT 14
PCT-US92-00278-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESSEE: Sterne, Kessler, Goldstei STREET: 1225 Connecticut Avenue, N.W. CITY: Washington
STATE: DC
STATE: DC
COUNTRY: USA
ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 19920116
CLASSIFICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Goldstein, Jorge A
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0609.349660
TELEPHONE: (202)833-7533
TELEPHONE: (202)833-7533
TELEPHONE: (202)833-7533
TELEPHONE: US 07/642,330
SEQUENCE CHARACTERISTICS:
LENGTH: 130 bases
TYPE: NUCLEIC ACID
STRANDEDNESS: both
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: 15
MOLECULE TYPE:
CT-US92-00277-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER
CORRESP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ICANT: Goodman, Howard M.
ICANT: Brand, Andrea
ICANT: Perrimon, Norbert
E OF INVENTION: Cell Ablat
ER OF SEQUENCES: 56
ESPONDENCE ADDRESS:
DRESSEE: Sterne, Kessler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  百工
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14, Application PC/TUS9200277 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                 50
                                                                                                                                                                                                                                                                                                                                                                                                                                      84.9%;
Similarity 100.0%;
45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 Մ
                                                                                                                                                                                                                                                                                                                                                                                CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Sterne, Kessler, Goldstein & 1225 Connecticut Avenue, N.W., S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Haseloff, James
Goodman, Howard M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UMBER: PCT/US92/00277
19920116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ablation Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
;-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0609.3496604
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 45; DB 5; Lo
Pred. No. 2.3e-15;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trans-Splicing Ribozymes
                                                                                                                                                & Fox
Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 130;
                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

0 ``

```
RESULT 15
US-08-090-193-11
; Sequence 11, Application US/08090193
; Patent No. 5641673
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: L.
MOLECULE TYPE:
CT-US92-00278-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 45
                                                                                                                                                                                           APPLICANT: Perrimon, No. 5641673bert
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Cell Ablation Using Tr
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein &
STREET: 1100 New York Avenue, Suite 600
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/090,193
FILING DATE: 23-DEC-1993
CLASSIFICATION DATA:
APPLICATION NUMBER: DCT/HS92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 07/642,333
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Goldstein, Jorge A
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0609.3476604
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)833-7533
TELEFAX: (202)833-8716
INFORMATION FOR SEQ ID NO: 14:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATB: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609.3080001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (202)833-8716
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: PC-I
SOFTWARE: PatentIn Re-
CURRENT APPLICATION DATA
APPLICATION NUMBER: PO
FILING DATE: 19920116
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: NUCLEIC STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 100.0%;
45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brand, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19920116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nucleic Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACID
Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           In Release
DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PC-DOS/MS-DOS
1 Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 45; DB
Pred. No. 2.3
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goldstein & e, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version #1.
                                                                                                                                                                                                                                                                                             Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 5;
2.3e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Trans-Splicing Ribozymes
                                                                                                                                                                                                                                                                                              #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

egastaj romelin of one e

0

Search completed: December 5, 2004, 08:00:07
Job time: 54 secs

0;

This Page Blank (uspto)

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum
Maximum
                                                                                                                                                                                                                                               Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run
                                                                                                                                                                                                                                                                                                                                                                                                                               Post-
                                                                                                                                                                                                                                                                                                                                                                                                            Databa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  earche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              equenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gize
                                                                                                                                                                                                                                                                                                                                                                                                                               processing:
                                                                                                                                                                                                                                                                                              Pred. 1 score and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             numbe
                                                                                                                                                                                                                                                                                                                                                                                                             Ċ
                                                                                                                                                                                                                                                                                                                                                                                                             \mathbf{o}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ው
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tabl
                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        score
                                                                                                                                                                                                                                                SC
                                                                                                                                                                                                                                                  Ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H
                                                                                                                                                                                                                                                                                              No. ii
greati
g deri
                                                                                                                                                                                                                                                                                                                                                                                                                                                 eq
eq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prote
   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H
  11111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
111000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OLIGO
Gapop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-1
14
1 MDKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hits
                                                                                                                                                                                                                                                Que:
                                                                                                                                                                                                                                                                                                                                   4664666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002273
                                                                                                                                                                                                                                                                                               er t
                                                                                                                                                                                                                                                                                                                                    Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cemb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                             Geneseq_23Sep04:*
geneseqp1980s:*
geneseqp2000s:*
geneseqp2001s:*
geneseqp2002s:*
geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                                                                                                            Gene
                                                                                                                                                                                                                                               57
                                                                                                                                                                                                                                                                                              the nu
than
d by a
    Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         search,
                                                                                                                                                                                                                                                  ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ō
                                                                                                                                                                                                                                                                                              number of resan or equal to
y analysis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        H
                                                                                                                                                                                                                                                ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                  000000000
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  eqs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       004,
     ろここここ りょうこう りょり りょうこう りょり しっしょ
                                                                                                                                                                                                                                                                                                                                                                                                                               45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cho
AAY90255

AAR10652

AAR10653

AAR10653

AAR57968

AAR67753

AAR98893

AAR98895

AAR98895

AAR9880503

AAU40661

AAU40661

AAU47189

ABM63708

ABM637180

AAG21510

AAG21510

AAG21509

ADN73301

AAG21509

ADN73301

AAB86675

AAB86675
                                                                                                                                                                                                                                                GI
                                                                                                                                                                                                                                                                                                                                                                                                                                Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                              sults
the t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                umma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60.
                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Θ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ħ
                                                                                                                                                                                                                                                                             UMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                             s predicted
e score of t
total score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ò
                                                                                                                                                                                                                                                                                                                                                                                                                               Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Search time 71
(without alignment
70.735 Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.1.6
Compugen
                                                                                                                                                                                                                                                                                               score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ወ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rs:
                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                              by chance the result keresult distributi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nents)
 Aay9025

Aar10653

Aar10653

Aar57968

Aar67753

Aar98893

Aar98899

Aar98899

Aar98899

Aar98899

Aabb80503

Aau40661

Aau40661

Aau67180

Aag21508

Aag21508

Aag21508

Aag21508

Aag21508

Aad134283

Ad134283

Ad134283
                                                                                                                                                                                                                                               Desci
                                                                                                                                                                                                                                                                                              to have being
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     updates/se
                                                                                                                                                                                                                                                rip
                                                                                                                                                                                                                                                                                                                  lave
    Ubiquitin
Capsid pr
Capsid pr
Capsid pr
Cauliflow
CMV coat
Coat prot
Coat prot
Coat prot
Coat prot
Agrobacte
Propionib
Propionib
Propionib
Propionib
Arabidops
Arabidops
Human cyt
Human cyt
Human cyt
Human cyt
Human cyt
MHC/HLA p
MHC/HLA p
MHC/HLA p
                                                                                                                                                                                                                                                                                                       printed
                                                                                                                                                                                                                                                 Ö
```

ው ተ																		
თ თ	n 01	თ	თ	თ	თ	თ	თ	ტ	ტ	თ	თ	ტ	თ	თ	ο	თ	თ	თ
42. 9	Ņ	2	2	<u>ب</u>	2	<u>ب</u>		2.	2	2			N			2		
203	တ	œ	ហ	4	-	-	82	80	62	62	23	20	15	15	15	15	15	15
7 5	י ס	4	4	7	N	ω	7	4	σ	4	5	თ	7	7	7	7	7	7
ABO73932	M6226	75	269	595	90	379	7400	121	4870	218	1347	3803	427	3428	427	3428	3428	27
Abo73932 Pseudomon	Propio			Pseudc	Aaw72060 HSV-2 str	Aag03795 Human sec	Abo74002 Pseudomon						Adl34277 MHC/HLA	Adl34284 MHC/HLA	Adl34278 MHC/HLA	Adl34283 MHC/HLA	Adl34280 MHC/HLA	Adl34276 MHC/HLA

Ŝ

## RESULT 1 AAY90255 ID AAY90 XX AAY90 XX AAY90 XX Ubiqu XX Ubiqu XX Ubiqu XX Ubiqu XX WO200 XX Nicot XX WO200 XX PN WO200 XX PT WO200 XX PT Ubiqu PT Produ AAY90 Ubiqu: Ubiqu 19-SE 0 itin itin 255; 255 P-2000 standard; monomer monomer; (first C-terminal protein; protein production/ entry) 14 fragment AA plant cell; ubiquitin

promoter

ALIGNMENTS

WO2000 11-DE( Nicot 22-JUN-2000. iana C-1998; 036129-A1 tabacum. 98WO-SG006103

11-DE C-1998; 98WO-SG000103

(MOLE TSNI MOLECULAR AGROBIOLOGY.

₩u J, Chen X;

WPI; 2 2000-431604/37. B; AAA30858.

Production of desired protein in pubiquitin monomer coding sequence desired protein. ed protein. plants or upstream plant c of the cells e gene by linking a encoding the

Claim 7; Page 18; 42pp; English.

This a protein encodi protein expres also monome the fu relates to a NA acid vector a NA vector able to transform a plant that comprises NA encoding a fusion protein having a ubiquitin ler linked to a protein of interest and further, where expression of usion construct is not under control of a ubiquitin promoter. The ruct allows enhanced production of the desired protein in plants or sequence represents the C-terminal fragment of a ubiquention relates to a method for enhancing production in in a plant or plant cell by inserting a nucleic acting a ubiquitin monomer upstream of a NA encoding the in, where the fusion construct encodes a fusion proteission is not controlled by the ubiquitin promoter. The protein ubiquitin ion of a de acid (NA) desired monomer.

```
AAR10652
AR10652
AAR10652
AAR1
             RESULT
AAR1065
ID AA
XX
                                                                                                                                        Ş
                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                  Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Ma
Best Loc
Matches
                                                                                                                                                                         at Local
                                                                                                                                                                                                                                                                                                                                                                                                                                      Transgenic culture on resistant t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-AUG-
25-MAR-
16-APR-
                                                                                                                                                                                                                                                            The gene encoding this protein was isolated from a plasmid (pUC18) containing DNA complementary to RNA 3 of the virulent strain FNY, isolated in New York on infected melons. Transgenic melon plantlets containing the nucleotide sequence introduced via an Agrobacterium tumefaciens intermediate are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10462. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003) to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CMV;
                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1991-046027/07
N-PSDB; AAQ10461.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ດ
AAR1065
                             AAR10653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Deboth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-AUG-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EP412912-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR10652
                                                                                                                                                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (BIOC-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR10652
                                               ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -AUG-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mat
                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MAR-2
APR-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      resistance;
                                                                                                                                                                                                                                                                                                                                                                                                          15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -2003
-2003
-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                     Similarity
14; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                        \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
.4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BIOCEM
                                                                                                           MDKS
                                                                                                                            MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
                                                                                                                                                                                                                                   218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Œ
                                                                                                                                                                                                                                                                                                                                                                                                        Page 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                         ç
                               ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T
                                                                                                                                                                                                                                                                                                                                                                                                                                     melon plantlets p
specific medium for some second plantlets p
                             andard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bentahar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             andard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
(revised)
(first en
                                                                                                           STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90EP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89FR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
ty 100.0%;
ervative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                       44pp;
                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             00402282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               00010848
                                                                                                                                                                     100.0%;
100.0%;
tive
                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Noel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                           14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                          French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     prodn.
for nev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mosaic
                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                             218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                        virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 14; I
Pred. No. 1.
; Mismatches
                                                                                                                                                                                       w
W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Θ
                                                                                                                                                                                     core
                                                                                                                                                                    red. No. 1.7
                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Perret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cucumis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                     from transformed shoots -
transformed plants etc.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14;
No.
                                                                                                                                                                                      14;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 3
1.6e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      strain
                                                                                                                                                                                    DB 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07;
                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                       0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                       Indels
                                                                                                                                                                                                     218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                      esp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     γd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     two=stage
                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                  2003
                                                                                                                                                                                                                                                                                  t
0
                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
PP XXX PD XXX PP XXX PP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                     SULT .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-AUG-2003
25-MAR-2003
16-APR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The gene encoding this protein was isolated from the virulent French strain 117F of CMV. Transgenic melon plantlets containing the coding sequence (introduced via an Agrobacterium tumefaciens intermediate) are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10461. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Transc
                                                                                                                            Cauli
                                                                                                                                                                polyr:
                                                                                                                                                                                                                                                                                                                  AAR57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Debot1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Capsi
                                                                                            FR270
                                                                                                                                                                                     Cauli
                                                                                                                                                                                                                         Cauli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resist
                    26
                                                                                                                                                                                                                                                                                                                                                      AAR57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-AUG-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-FE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cucum
                                                                                                                                                                                                                                                            25-MAR-2003
20-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BIOC
                                                                                                                                                                                                                                                                                                                                                                     4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SDI
                    FE!
                                                          Ø
                                                          口
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          т
м,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genic melon plantlets prodn. from transformed shoots - re on specific medium for new transformed plants etc., tant to cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ber
                    в-1993;
                                                           P-1994
                                                                                              1960-A1
                                                                                                                                                                   ibozyme;
                                                                                                                                                                                    flower
                                                                                                                                                                                                                        flower
                                                                                                                                                                                                                                                                                                                   968;
                                                                                                                                                                                                                                                                                                                                                      968 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1991-046027/07.
B; AAQ10462.
                                                                                                                                  flower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -) BIOCEM SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                912-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strain l17F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                              MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             218 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 19; 44pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bentahar
                                                                                                                                                                   mosaic virus;
e; inactivate;
                                                                                                                                                                                                                        mosaic virus capsid protein.
                                                                                                                                  mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
(revised)
(first entry)
                                                                                                                                                                                                                                                            (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            O<sub>ff</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89FR-00010848.
                    93FR-00002269.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90EP-00402282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        resistance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucumber
                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                   virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
დ
                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Noe1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             French.
                                                                                                                                                                    CMV; capsid protein; coat inactivation; resistance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mosaic
                                                                                                                                                                                                                                                                                                                                                       218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 14; DB
Pred. No. 1.7
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        capsid protein;
                                                                                                                                                                                                                                                                                                                                                       AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Virue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2; L
1.7e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cucumis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                               protein; crop pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          melo.
                                                                                                                                                                    protection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     esp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
```

Q

```
AAR6
                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
Matches 1
                                                                                                                                                               virus resistance; disease resishypersensitive response; crop in Lycopersicon esculentum; tobacco ToMV; CMV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 199
N-PSDB;
                          WPI; 199
N-PSDB;
                                                                                                                                                                                                                                                                  7753
AAR67753
                                                                                                                                                                                                                                                                                                                                                                           The RNA encoding the capsid protein of cauliflower mosaic virus can be targetted by a nucleic acid sequence called a "polyribozyme". The polyribozyme has endoribonuclease activity and is able to inactivate several catalytic regions derived from ribozymes and confers complete resistance to virus. See AAQ67391-94. (Updated on 25-MAR-2003 to correspondent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                      of new v
encoder
eliciti
                                                                                                                                                                                                                <u>∑</u>
                                                                                                                                                      Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26
                                                 De
                                                               (SANO
(SANO
                                                                                            04-JUN-1993;
                                                                                                           03-JUN-1994;
                                                                                                                         22-DEC-1994.
                                                                                                                                        WO9429464-A1
                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure;
                                                                                                                                                                                                                             25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                          ப்ர
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -FEB-
                                                  Haan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polyribozyme
       constructs des RNA tha
                                                                                                                                                                                                                coat
                            1995-036490/05
)B; AAQ76106.
                                                                                                                                                                                                                                                                                                                                                 Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         סי
                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .1993;
                                                               SANDOZ I
SANDOZ I
SANDOZ-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENE
                                                                                                                                                                                                                                                                                                                                          Similarity
                                                  PT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4-281767/35
AAQ67395.
                                                                                                                                                                                                                                                                                                       MDKS
                                                                                                                                                      mosaic
                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                             MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                218
                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pere
WA that agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             can
                                                                                                                                                                                                                                                                                                                                                                                                                                       Fig
                                                                                                                                                                                                                                                                                                                                  100.0%;
larity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                               (revise (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                     yme contg. several
n inactivate gene f
resistant transgeni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SHEARS
                                                                                                                                                                                                                                                                                                       ESTSAGRNRR
                                                               LTD.
PATENT GMBH.
-ERFINDUNGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93
        for imparting pathogen, t interacts with viral
                                                                                             93GB-00011593
                                                                                                           94WO-EP001817
                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ס'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FR-
                                                                                                                                                                                                                                      .sed)
                                                                                                                                                                                                                                                                                                                                                                                                                                       67pp;
                                                                                                                                                                                                                                                                  prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YTG
                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00002269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QIT
                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                                                                                                                                                       French.
                                                                                                                                                                            mato mosaic virus; minus-
presistance; transgenic p
crop improvement; tomato;
tobacco; Nicotiana tabacu
                                                                VERW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ζ,
                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                                 Score 14; I
Pred. No. 1.
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                           for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baudot
                                                                GES
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    catalytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                     r viral (plants,
        RNA p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ភ
                                                                                                                                                                                                                                                                                                                              DB 2
1.7e-u
                                                                                                                                                                                                                                                                                                                                                                                                                                                     c regions
capsid pr
, also DNA
      polymeras
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ollivo
                                                                                                                                                                                         minus-strand
genic plant; 
                                                                                                                                                                                                                                                                                                                                ;06;
                                                                                                                                                                            tabacum;
              virus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein, esp. for
                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence en
      resistance to e to generate
                                                                                                                                                                            coat
                                                                                                                                                                                                                                                                                                                                                 218;
                                                                                                                                                                                          cross
                                                                                                                                                                                                 RNA;
                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     encoding
                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                         protection;
              ť
                                                                                                                                                                                                                                                                                                                                  Gaps
        plants
an
                                                                                                                                                                                                                                                                                                                                                                                      correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                     prepn
ing it
                                                                                                                                                                            ďР
                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                  0;
```

```
RESULT 6

AAR93803

ID AAR938
                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Mat
Best Loca
Matches
                                                                                                                                                 New in plants resist
                                                                                                                                                                                                                                                                                                                                                            Coat protei resistance.
                                                              mosaic
infect
known
quash,
infect
                                                                                                                                                                                                                                                                                                                                                                                                            16-007
02-DE0
                                                                                                                                                                                          WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A chimeric cucumber mosaic virus RNA-3 (given in AAQ76106) codes for the coat protein (CP) of tomato mosaic virus (AAR67552) as well as its own CP (AAR67753). The construct elicits minus-sense RNA that interacts with the RNA-dependent RNA-polymerase of an invading virus, thus conferring virus-resistance on a host plant, e.g. tobacco, tomato. (Updated on 25-MAR-2003 to correct PN field.)
                                          Sequer
                                                                                                                                                                                                                                                                                                                     W09621
                                                                                                                                                                                                                                                                                                                                                                                         Coat
                                                                                                              Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure;
                                                                                                                                                                                                                       Boeshore
                                                                                                                                                                                                                                          (ASGR
                                                                                                                                                                                                                                                                                07-JUN-1995;
                                                                                                                                                                                                                                                                                                   11-JUL-1996
                                                                                                                                                                                                                                                                                                                                          Cucumi
                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                             30-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
                        Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                        803;
                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                            T-2003
C-1996
                                                            protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based (CP sequences. The genes may be used for producing plants such as , cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                   solated cucumber mosaic vs, partic. of the family tant to infection.
                        tch
                                            nce
                                                                                                                                                                                          1996-333993/33
B; AAT17259.
                                                                                                                                                                                                                                                             C-1994;
                                                                                                                                                                                                                                                                                                                                                                      protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            803
                                                                                                                                                                                                                                          -) ASGROW
                                                                                                                                                                                                                                                                                                                       1018-A<u>1</u>
     Similarity 100.0%;
4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
Similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                          mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218
                                            218
                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MDKSESTSAGRNRR
                                                                                                                                 Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page
                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                          of.
                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                      CP;
                                                                                                                                                                                                                                          SEED
                                                                                                                                                                                                                                                              94US-00367789
                                                                                                                                                                                                                                                                                 95WO-US007234.
                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                 8; 80pp;
                                                                                                                                                                                                                                                                                                                                         virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30;
                                                                                                                                                                                                                                                                                                                                                                      cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                          A35 strain of cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50pp;
                                                                                                                                                                                                                       JR,
                                                                                                                                                                                                                                                                                                                                          strain
                                                                                                                                 English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             English
                                                                                                                                                                                                                                                                                                                                                                       mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                             218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u></u>0
                                                                                                                                                                                                                        Tricoli
                                                                                                                                                             virus coat protein DNA - used
Cucurbitaceae or Solanaceae,
                                                                                                                                                                                                                                                                                                                                          A35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 14; DB 2;
Pred. No. 1.7e-06;
Mismatches 0;
      Score 14; DB 2
Pred. No. 1.7e-
Mismatches
                                                                                                                                                                                                                        DM,
                                                                                                                                                                                                                                                                                                                                                                      CMV;
                                                                                                                                                                                                                       Reynolds
2;
-06;
0;
                                                                                                                                                                                                                                                                                                                                                                      V27;
                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                       JF,
                         218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      218;
                                                                                                                                                                                                                        Carney
                                                                                                                                                                                                                                                                                                                                                                      V34;
                                                                                                                                                               which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                       A3
                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Loc

14;

0

Indels

0

0

<del>《美国</del>内集》。2015年3月2日 - 日本中国 (1985年 - 1985年 - 19

```
AAR98
                                                                                                                                Ş
                                                                                                                                              Query N
Best Lo
Matches
                                                                                                                                                                                     Coat protein (CP) genes of mosaic virus (CMV) were is infected plant tissue by F known CP sequences. The gequash, cucumber, peppers a infection. (Updated on 16-
                                                  16-OCT-2
                                                                                         T 8
                                    Coat
                                                                                                                                                                                                                                                  New isolated cucumber mplants, partic. of the resistant to infection.
               Coat protein; resistance.
                                                                     AAR98894
                                                                                   AAR98894
                                                                                                                                                                                                                                     Disclosure;
                                                                                                                                                                                                                                                                             WPI; 1996-333993/33
N-PSDB; AAT34664.
                                                                                                                                                                                                                                                                                                                           30-DEC-1994;
                                                                                                                                                                                                                                                                                                                                                      11-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                                              Coat protein; resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR98893;
   Cucumb
                                                                                                                                                    Local
                                                                                                                                                            Mat
                                                                                                                                               Œ
                                                                                                                                                                                                                                                                                                                                                                   21018-A1
                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                  2003
1996
                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \vdash
                                                                                                                   MDKSESTSAGRNRR
                                                                                                                                               0 4
                                                                                                                                                                                                                                                                                                                                                                                                                               996
                                                                                                                                                                                                                                                                                                               ASGROW
                                                                                                                                                                                                                                                                                                                                                                                mosai
                                                                                   standard;
                                                                                                                                              imilarity; Conservat
                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDKSESTSAGRNRR
                                                                                                                                                                                     n (CP) genes of the V27, V33, V34 and A35 strain of cucumbers (CMV) were isolated. The CMV CP genes were isolated from ant tissue by PCR amplification of cDNA using primers based guences. The genes may be used for producing plants such as mber, peppers and tomatoes which are resistant to CMV (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                    Fig 1;
                                                                                                                                                                          AA;
   ji.
                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                  of.
                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
(first en
                                                 m H
                       CP;
                                    rh
                                                                                                                                                                                                                                                                                                 Mcmaster
                                                                                                                                                                                                                                                                                                                                                                                                     CP;
                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                               SEED
                                                 evi
irs
                                                                                                                                                                                                                                                                                                                            94US-
                                    the
                                                                                                                                                                                                                                                                                                                                                                                 virus;
                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                         5WO-US007234
                                                 ised)
st entry)
  .rus;
                       cucumber
                                                                                                                                                                                                                                                                                                                                                                                                     cucumber
                                                                                                                                                                                                                                     80pp;
                                                                                  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                    V33
                                                                                                                                                                                                                                                                                                               ၀
                                                                                                                                                                                                                                                                                                                                                                                                                  V27
                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                            00367789
                                                                                                                                              100.0%;
100.0%;
tive (
                                                                                                                                                                                                                                                         mosaic ve family
                                                                                                                                                                                                                                                                                                 JR,
                                                                                                                                                                                                                                                                                                                                                                                 strain
                                                                                                                                 14
                                                                                                                    14
                                   strain
                                                                                                                                                                                                                                                                                                                                                                                                                  strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
   rain
                                                                                                                                                                                                                                     English
                      mosa
                                                                                                                                                                                                                                                                                                                                                                                                     mosaic
                                                                                                                                              0;
                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                218
                                                                                                                                                                                                                                                                                                 Tricoli
                                                                                                                                                                                                                                                         virus coat protein Cucurbitaceae or
                                                                                                                                              Score :
Pred. 1
                                                                                   \boldsymbol{\omega}
                                    Of.
                                                                                                                                                                                                                                                                                                                                                                                                                  0£
                      i
C
                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                 cucumber
                                    cucumber
                                                                                                                                                                                                                                                                                                                                                                                                     virus;
                                                                                                                                                     14;
No.
                                                                                                                                                                                                                                                                                                 DM,
                       rus;
                                                                                                                                               Ò
                                                                                                                                               Ch
                                                                                                                                                                                                                                                                                                                                                                                                    CMV;
                                                                                                                                                     DB 2
                       CMV;
                                                                                                                                                                                                                                                                                                 Reynolds
                                                                                                                                                                                                                                                                                                                                                                                                                  mosaic
                                    mosaic
                                                                                                                                                     ,
0
                                                                                                                                                                                                                                                                                                                                                                                                     V27;
                                                                                                                                               00
                                                                                                                                                                                                                                                         DNA - used Solanaceae,
                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                 JF,
                       V33;
                                                                                                                                                                                                                                                                                                                                                                                                     V33;
                                                                                                                                                            218;
                                                                                                                                                                                                                                                                                                 Carney
                       V34;
                                                                                                                                                                                                                                                                                                                                                                                                     V34;
                                                                                                                                                                                                                                                         to produce which are
                                                                                                                                             0
                                                                                                                                              Gaps
                                                                                                                                                                                                           ဗ္ဗ
                                                                                                                                               0
```

```
PRACT X PRACT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Mat
Best Loca
Matches
New is plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-007
02-DEC
                                                        WPI; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 quash,
infect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New is plants resist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coat
mosai
infec
                                                                                                                                                                                         30-DE
                                                                                                                                                                                                                                                                                                      WO962
                                                                                                                                                                                                                                                                                                                                                                               resist
                                                                                                                                                                                                                                                                                                                                                                                               Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                     Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO962
                                                                                                               Boeshore ML,
                                                                                                                                                                                                                                                                 11-JU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JU
                                                                                                                                                                                                                             07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                          Cucumi
                                                                                                                                                    (AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        known
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Boesh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SΨ
                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        T-2003
C-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tch
                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based on CP sequences. The genes may be used for producing plants such as , cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
solated cucumber mosaic virus coat protein DNA - used s, partic. of the family Cucurbitaceae or Solanaceae,
                                                                                                                                                    -) ASGROW SEED
                                                                                                                                                                                         2-1994;
                                                                                                                                                                                                                                                                                                                                          per mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    solated cucumber mosaic virus coat protein DNA - used s, partic. of the family Cucurbitaceae or Solanaceae, tant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1996-333993/33
B; AAT34665.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ore ML,
                                                                                                                                                                                                                                                                                                       1018-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1018-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 218 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                      of the V34 strain of cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
                                                                                                                 Mcmaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mcmaster
                                                                                                                                                                                                                                                                                                                                                                                               CP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEED
                                                                                                                                                                                         94US-00367789.
                                                                                                                                                                                                                               95WO-US007234.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2; 80pp;
                                                                                                                                                                                                                                                                                                                                                                                                 cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                           strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 English.
                                                                                                                                                                                                                                                                                                                                                                                                 mosaic
                                                                                                                Tricoli DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tricoli DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 14; DB
Pred. No. 1.7
, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 virue;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; L
1.7e-06;
0;
                                                                                                                                                                                                                                                                                                                                                                                                 CMV;
                                                                                                                 Reynolds JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Reynolds JF,
                                                                                                                                                                                                                                                                                                                                                                                                 V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 218;
                                                                                                                  Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carney
                                                                                                                                                                                                                                                                                                                                                                                                V34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to produce which are
   to produce which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>o</u>,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

- Alemanneses

```
RESULT 11
AAU40661
ID AAU40661
                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                              Query Matcr
Best Local
Matches 1
                                                              Query Ma
Best Loc
Matches
                                                                                                        This sectume factor to an ar
                                                                                                                                     Disclosure;
                                                                                                                                                                                                                                 17-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Coat protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber mosaic virus (CMV) were isolated. The CMV CP genes were isolated from infected plant tissue by PCR amplification of cDNA using primers based known CP sequences. The genes may be used for producing plants such as quash, cucumber, peppers and tomatoes which are resistant to CMV infection. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                   Anti-cucumber
                                                                                                                                                                                                                                               05-OCT-1999
                                                                                                                                                                                                                                                             KR99075101-A
                                                                                                                                                                                                                                                                           Agrobacterium
                                                                                                                                                                                                                                                                                         Agrobacterium
                                                                                                                                                                                                                                                                                                       Agrobacterium
                                                                                                                                                                                                                                                                                                                     25-JUL-2002
                                                                                                                                                                                                                                                                                                                                   ABB80503
                                                                                                                                                                                                                                                                                                                                                 ABB80503
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           resistant
                                                                                                                                                                                                    (RURA-)
                                                                                           equence
                                                                                                                                                                                                                   7-MAR-1998;
                                                                      Local
                                                                                                                                                                 I; 2000-577926/54
PSDB; ABL58209.
                                                                                                                                                                                                                                                                                                                                                                                                                               Match
                                                                             Match
                                                                                                        sequence represents a placiens used within the anti-cucumber mosaic
                                                                                                                                                                                      SH,
                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                               Similarity
12; Conser
                                                                                                                                                                                                                                                                                                                                                                                    -
                                                 w
                                                                                                                                                                                                                                                                                                                                                                                                  \vdash
                                    w
                                                                                                                                                                                                    RURAL
                                                                                                                                                                                                                                                                                                                                                                                    MDKSESTSAGRNRR
                                   KSESTSAGRNRR
                                                                                           218
                                                                                                                                                                                                                                                                                                                                                                                                                                             218
                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; imilarity 100.0%; Conservative
standard;
                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                      Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ť
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fig
                                                                                                                                    Page
                                                                                           AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                              ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           infection
                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                   mosaic
                                                                                                                                                                                                    DEV
                                                                                                                                                                                      S₩,
                                                                                                                                                                                                                                                                           tumefaciens
                                                                                                                                                                                                                                                                                          tumef
                                                                                                                                                                                                                                                                                                        tumefaciens
                                                                                                                                                                                                                   98KR-
                                                                                                                                                                                                                                 98KR-00009096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..
-:
                                                              rvat
                                                                                                                                     4:
                                                                                                                                                                                                     ADMINISTRATION.
                                                                                                                                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; qq08
                                                                                                                                                                                      Park
protein;
                                                                                                                                                                                                                                                                                          aciens
                                                                                                                                    6pp;
                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                   96060000
                                                              85.7
100.
                                                                                                                                                   virus
                                                  14
                                                                                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                      JS,
                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                       0
                                                                                                                                     Korean
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English
                                                                     #
                                                                                                                                                                                                                                                                                                       protein
                                                                                                        protein
e scope o
virus to
                                                                                                                                                   tomato
                                                                                                                                                                                                                                                                                          ant
                                                               0
                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
70
                                                                             S
                                                                                                                                                                                      Hwang
                                                              Score 12; DE Pred. No. 0.; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                Score 14; DE Pred. No. 1.7; Mismatches
B
                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                          cucumber
                                                                                                          tomato
                                                                                                               of the inv
                                                                                                                                                                                                                                                                                                       sequence
                                                                                                                                                                                      SX
                                                                    DB 3; L
                                                                                                                                                                                                                                                                                                                                                                                                                 DB
7e-1
                                                                                                                invention. The invent
                                                                                                                                                                                                                                                                                          mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                        2;
06
                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                             Length
                                                                                                                                                                                                                                                                                         virus;
                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                               218
                                                                                                                                                                                                                                                                                          ct
                                                                                                                invention
                                                                             æ
                                                                                                                                                                                                                                                                                        ransgeni
                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                          a
                                                                                                                relat
                                                                                                                                                                                                                                                                                          tomat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                               ÷.
```

RESULT AAU6718 ID A

7189 AAU6

189

standard;

protein;

70

A.

**.** 

```
ঠ
밁
                                            Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-APR-2000;
02-JUN-2000;
07-JUL-2000;
                                                                                                             enzyme
this p
obtain
ftp.wi
                                                                                                                                                                                                                                                                              pustul
P. acr
                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAPHO
uveit:
inflar
                                                                                                                                                           there:
                                                                                                                                                                                                                     samp.
                                                                                                                                                                                                                                 present sample
                                                                                                                                                                                                                                                                                                                                                                                   Propio
vaccii
treat:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  derma
                                                                                                                                                                                  speci:
                                                                                                                                                                                                                                                      nervou
lesior
                                                                                                                                                                                                                                                                                                               polype
                                                                                                                                                                                                                                                                                                                                                            Examp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Skeik
L'mai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Propi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Propi
                                                                                                                                                                                                          polyp
                                                                                                                                                                                                                                                                                                      סי.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (CORI
                                                                                        Seque
                                                                                                                                                                                                                                                                                                                                       Seque
                                                                                                    equences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic holypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by acnes. The disorders include SAPHO syndrome (synovitis, acne, ustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. Acnes is also involved in infections of bone, joints and the central presence of associated with acne vulgaris. A method for detecting the ample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The olypeptides may be used as antigens in the production of antibodies pecific for P. acnes proteins. These antibodies can be used to ownregulate expression and activity of P. acnes polypeptides and herefore treat P. acnes infections. The antibodies may also be used as iagnostic agents for determining P. acnes presence, for example, by nzyme linked immunosorbent assay (ELISA). Note: The sequence data for his patent did not form part of the printed specification, but was btained in electronic format directly from WIPO at tp. wipo.int/pub/published_pct_sequences
                                                        Loc
                                                                                                                                                                                                                                                                                                     ac
                                                                   Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F
F
                                                                                                                                                                                                                      Ď.
                                                                    tch
                                                                                          nce
                                                                                                                                                                                                                                                                                                                                                              <u>1</u>e
                                                                                                                                                                                                                                                                                                                                                                                   onibacterium acnes
nating against and
ing acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661;
                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-616774/71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 V-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              onibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tological;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nmatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              onibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YAW,
                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                   AAS59512.
                                            Similarity 100.
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis endophthalmitis; bone; joint; central nervous system; ELISA; tory lesion; acne vulgaris; enzyme linked immunosorbent assay; ogical; osteopathic; neuroprotectant.
                      SAGRNRR 14
                                                                                          70 AA;
 SAGRINRR
                                                                                                                                                                                                                                                                                                                                                               SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0199047P.
2000US-0208841P.
2000US-0216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Persing DH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001WO-US012865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J,
                                                                                                                                                                                                                                                                                                                                                              ID NO 1856;
88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acnes immunogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                   0.0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ķ
                                                                                                                                                                                                                                                                                                                                                                                               polypeptides and nucleic diagnosing infections, es
                                                      0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mitcham JL, Wang
                                                                                                                                                                                                                                                                                                                                                             1069pp;
                                            <u>.</u>
                                            Score 7; DB 4
Pred. No. 8.3
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein #1557.
                                                       DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang SS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D.
                                            °;
                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                              ic acids useful for especially useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bhatia A;
                                             Indels
                                                                  70;
                                             о
;:
                                                                                                                                                                                                                                                                                                                            immunogenic are used in
                                             Gaps
```

```
RESULT
ABM6370
ID AI
                                                                                                                                                                 Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                     polypeptides.
the treatment.
P. acro-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-APR-
02-JUN-
07-JUL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Z-
¥P
                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Propionibacterium acnes vaccinating against and treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SAPHO syndrome; synovitis; ac uveitis; endophthalmitis; bon inflammatory lesion; acne vul dermatological; osteopathic;
      ABM63708
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Skeiky YAW,
L'maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAU67189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CORI-)
                 08
                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            I; 2001-616774
PSDB; AAS59784
                                                                                                                                         Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -2000;
-2000;
-2000;
                                                                2
                                                                                         æ
                                                                                                               50.0 Similarity 100. 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORIXA CORP
                                                                                                                                                                 70
                                                                                        SAGRNRR
                                                                 SAGRNRR
     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ
                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0199047P.
2000US-0208841P.
2000US-0216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Persing DH,
e J, Zhang Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001WO-US0128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                     IJ
                                                                                        14
                                                                ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acnes
    prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    283
                                                                                                                          0*;
     'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 К
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      polypeptides and nucleic diagnosing infections, e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mitcham
, Jen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; acne; pustulosis; hypertosis; osteomyelitis; bone; joint; central nervous system; ELISA; vulgaris; enzyme linked immunosorbent assay; lc; neuroprotectant.
      70
                                                                                                                ,;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     106
                                                                                                                                        ທ
                                                                                                               Score 7; DB Pred. No. 8.; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; qqe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JL, Wang
Carter D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                 Ø
                                                                                                                           u A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ָׁםְ
                                                                                                                           ** **
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ss,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #28
                                                                                                                <u>..</u>
                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       c acids useful especially use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bhatia
                                                                                                                 Indels
                                                                                                                                        70;
                                                                                                                <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ful
                                                                                                                                                                                                                                                                                                                                                                                                 immunogenic are used in caused by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , Ö
                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                <u>.</u>
```

```
invent
the pu
                                                                                                                                                                                         polynu
antige
for de
patien
patien
protei
polype
vulgar
protei
nuclei
stimul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New Pi
polype
or foi
                                                                                                                                     sequence
reading f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        additi
polynu
invent
method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The in encodi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mitcha
Zhang
Barth
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Examp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Propi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Acne immun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-0C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABM6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CORI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-0C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ropi
                                     he invention relates to an isolated polynucleotide (ACF64435-ACF64733) ncoding a Propionibacterium acnes protein. The invention also relates to olypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to mmunogenic fragments of P. acnes polypeptides. The invention dditionally encompasses expression vectors and host cells comprising a olynucleotide of the invention; antibodies against polypeptides of the nvention; fusion proteins comprising a polypeptide of the invention; a ethod for stimulating an immune response specific for a P. acnes olynucleotide and an isolated T cell population comprising T cells prepared is this method; a vaccine composition (comprising P. acnes polypeptides, olynucleotides, antibodies, fusion proteins, T cell populations, or notisen-presenting cells that express the polypeptide); a method and kit or detecting or determining the presence or absence of P. acnes in a atient. The P. acnes polypeptides, polynucleotides, fusion roteins, T cell populations or antigen-presenting cells that express the olypeptides are useful for diagnosing, preventing or treating acne ulgaris, or for stimulating an immune response specific for a P. acnes rotein. The polynucleotides can also be used as probes or primers for ucleic acid hybridisation. The vaccine composition is useful for the timulation of an immune response against P. acnes, or for treating acne, and the kit is useful for performing a diagnostic assay. The present equence represents a polypeptide predicted to be encoded by an ORF (open equipal performance of the present of the pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ropionibacterium acnes polypeptides and polynucleotides encoding the eptide, useful for diagnosing, preventing or treating acne vulgaris r stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vulgaris; antiseborrhoeic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2003-381789/36.
B; ACF64713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            am JL, Skeiky YAW, Persing DH,
Y, Wang S, Jen S, Lodes MJ,
B, Vallieve-Douglass J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     onibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ostimulant; immune

    CORIXA CORP

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    onibacterium acnes predicted ORF-encoded polypeptide #28384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T-2003
    70 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 28384; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001US-00978825.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bhatia
Benson D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maisonneuve JL;
Jones R, Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ,
D
```

밁

S

œ

SAGRNRR 14

SAGRNRR

Query Ma Best Loc Matches

Loc

Similarity 100
7; Conservative

100.0%; 50.0%;

Score 7; I Pred. No.

DB 6;

Length 70;

о ,-

Mismatches

<u>,.</u>

Indels

0;

Gaps

0

Match

H -

```
RESULT 14
ABM37180
                                                                         encoding a Propionibacterium acnes protein. The invention also relates to complypeptides encoded by the polypucleotides (ABM35624-ABM64356) and to complypeptides encoded by the polypucleotides (ABM35624-ABM64356) and to comprising a companie fragments of P. acnes polypeptides. The invention comprising a companie of the invention, fusion proteins comprising a polypeptide of the invention; antibodies against polypeptides of the invention; a method for stimulating an immune response specific for a P. acnes comprising a polypeptide of the invention; a comprising a polypeptide and an isolated T cell population comprising T cells prepared compression this method; a vaccine composition (comprising P. acnes polypeptides, composition) comprising T cells prepared comply cells that express the polypeptide, antibodies, in the presence or absence of P. acnes in a composition comprising T cells prepared composition; and method for inhibiting the development of P. acnes in a composition; and method for inhibiting the development of P. acnes in a composition; and method for inhibiting the development of P. acnes in a composition; and the composition is useful for the present of proteins, or for stimulations or antigen-presenting cells that express the composition is useful for the composition is useful for the stimulation of an immune response against P. acnes, or for treating acnes composition is useful for the sequence represents a polypeptide predicted to be encoded by an ORF (open reading frame) contained within the P. acnes polymucleotides of the composition. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from wipo at figure is achieved by an ORF (open composition).
  Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mitcham JI
Zhang Y,
Barth B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polypept:
or for st
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-381789/36
N-PSDB; ACF64441.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABM37180
                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-OCT-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Acne vulgaris; antiseborrhoeic; immunostimulant; immune respons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABM37180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Propionibacterium 
ypeptide, useful fo 
for stimulating an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ļ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JL, Skeiky YAW, P., Wang S, Jen S, Jen S, Vallieve-Douglass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORIXA CORP
   Similarity 7; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard; protein;
                                                                   70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 1856; 1481pp; English.
                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            um acnes polypeptides and polynucleotides encoding the for diagnosing, preventing or treating acne vulgaris, an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ent
  50.0%;
100.0%;
tive (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Persing DH,
Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70
Score 7; DB pred. No. 8. 0; Mismatches
    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dermatological;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORF-encoded polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bhatia A,
Benson DR,
                 8
EGG
                  \omega or
   0
                                  Length 70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Maisonneuve JL;
Jones R, Carter
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #1856
 0;
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
   0
```

```
RESULT 15
AAG21510
ID AAG219
멍
                                                                                   5
                                                               Protein ider hybridisatic termination
19-APR
21-APR
23-APR
23-APR
23-APR
30-APR
30-APR
06-MAY
06-MAY
11-MAY
11-JUN
01-JUN
11-JUN
11-JUN
11-JUN
11-JUN
                                                 25-FEB
05-MAR
09-MAR
                                         08-APR
                                           23-MAR
25-MAR
29-MAR
01-APR
06-APR
                                                                    Arabi
                                                                      17-0C
                                                                  Prote
                                                             Arabidopsi
                                                           EP103
                                                                         AAG21510
                                                         ES-
                                                      ·FEB
                                                                    dopsi
                                                         יטי
                                                           405
                                                                                 52
                                                                           10
                                                                      2000
                                                                                   œ
                                                        200
۳.
Ω
                                                                                 ن
                                                                  lenti
Ø
                                                                    œ
                                                                                 |||||
                                                                 9
                                                                                   GRNR
                                                               on assay;
                                                             thaliana
                                                                    thaliana
icat
                                                                                   ×
                                                                      81
                                                                                 58
                                                      ΕP
                                                                                   14
ä
                                                                           b
gen
                                                                           rote
                                                      003
                                                                      ø
                                                                    pro
                                                                      H
444505666777788899999
                        889000010040000444
                                             76656
                                                                 E E
                                                                           in;
                                                                    ite
0584444
        8157274278045840444482223791360372557
gna
                                                                    Ín
                                                      9
                                                                mapping;
                                                                           07
                                                                  \mathbf{\dot{\mu}}
                                                                    m
                                                                    ra
                                                                  transduct
                                                                    lgment
                                                                           B
                                                                gene
                                                                    S
                                                                    S
E
                                                                 ion
                                                                    ID
                                                                n pathway; mexpression
                                                                    ö
                                                                    2
                                                                    409
                                                                  ∌
                                                                 netabol:
                                                                 110
                                                                 ס ס
                                                                 )athwa
```

```
Searcl
        망
            ঠ
                         Que
Bes
Mat
                ery Maches
ch com
                        Ma
                   വ
pleted:
74 sec
                  L Ch
        96
                         Ç
                 70
sed:
        <u>8</u>=
                         ES-ES
                ilarity
Conservat
        ASTSE
0
  December
                        99US-0149175P.
99US-0149722P.
99US-0149722P.
99US-0149722P.
99US-0149929P.
99US-01510884P.
99US-01510865P.
99US-0151303P.
99US-0151303P.
99US-0151303P.
99US-0153758P.
99US-0155486P.
99US-0155486P.
99US-0155486P.
99US-0155486P.
99US-0155486P.
99US-0155486P.
99US-0155486P.
99US-015929P.
99US-015929P.
99US-0151403P.
99US-0151403P.
99US-0151403P.
99US-0151403P.
99US-0160981P.
99US-0161406P.
99US-016136P.
99US-016136P.
99US-016136P.
99US-016136P.
99US-016136P.
99US-0161992P.
99US-0161992P.
99US-0161992P.
99US-0161992P.
        102
            9
                 u
                100
100
  5,
                  . 0
  2004,
                  *
                0;
                Score 7; DB 3
Pred. No. 12;
0; Mismatches
  08:15:15
                No.
                0;
                    Length
                Indels
                     107;
                0
                Gaps
                0
```

This Page Blank (uspto)

Run

```
Title:
Perfect score:
Sequence:
                                                                                              Minimum
Maximum
                                                                                                                                  Word size
                                                                                                                                                 Searched:
                                                                  Database
                                                                                                                                                                                                                                               OM nucleic
                                                                               Post-processing:
                                                                                                                     Total number
                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                 on:
                                                                                               DB
DB
                                                                                              seq
seq
                                                                                                                                                                                                                                              nucleic search,
                                                                                                                     0f
                                                                                              length:
US-09-857-841-3
53
1 gatccatggacaaa
                                                                                                                                                              OLIGO_NUC
Gapop_60.0
                                                                                                                     hits
                                                                                                                                               32822875 seqs,
                                                                                                                                                                                                                                December
                                                                              Listing first
                                                                                                                                   0
                                                                                                                                                                                    gatccatggacaaatctgaa..
                                                                                                                                                                                                                                                                    Copyright
                                                                                                                  satisfying
                                                                                              2000000000
                                                                                                                                                                                                                                5,
                                                                                                                                                                                                                                                                    GenCore
(c) 1993
                                                                                                                                                                                                                               2004,
                                                                                                                                                                                                                                             using sw
                                                                                                                                                               Gapext
                                                                                45
                                                                                                                                                 18219865908
                                                                                                                     chosen
                                                                                summaries
                                                                                                                                                                                                                                06:39:02
                                                                                                                                                               60.0
                                                                                                                                                                                                                                                                    version - 2004
                                                                                                                                                                                                                                              model
                                                                                                                   parameters:
                                                                                                                                                                                                                 2 ; Search (without a 1303.175 M
                                                                                                                                                 residues
                                                                                                                                                                                                                                                                    5.1.6
Compugen Ltd.
                                                                                                                                                                                    .gtcgtaaccgtcgacgagct
                                                                                                                                                                                                               h time 1482 Seconds
alignments)
Million cell updates/sec
                                                                                                                     65645750
                                                                                                                                                                                     53
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

ი			0 0 0		-	იი		Ω,	. 4	0 !	Resul No
2 2 2	100	17 18 19	409	<u>ლ                                    </u>	<b>-</b> 6	9 8	10	4 N	ω <sub>2</sub>	<b>–</b>	• 11
		18 18									Score
444	44	34.0 34.0	444	44	44	4.	44.	4.	4.	4 1	% Query Match
$\omega$ $\alpha$	17	742 742 760	3 H O	ထာထ	N N	70	90	21	8	NI	Length
<b>40</b> R	9	იდთ	ი დ ი	7 5	<b>9</b> 4	44	ന ഗ	σ N	N N	4	ĎВ
29972 62265 74943	K19049	BX874992 AG379970 CB618065	63451 50196 61802	75201 18506	22366 27188	33309 34759	01764 59541	49413 01683	4016 0600	M06723	ID
2 O O	K19049 C70842	X87 G37 B61	3451 0196 1802	X75201 K18506	22366 27188	3309 4759	1764 9541	9413 1683	16	M06723	Descript
HVSM OSII	T7	87 II	OSIIED CH240 OSIIE	X752 ST77	Lotus NF014E	2	ΝШ	94 5N	BB4401 BB0060	080	ion

Query Mai Best Loca Matches Qy	FEATURES source	BM067231/c LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL COMMENT	υνος αφοτου απολουα το
15 Score 45; DB 4; Length 127; 2al Similarity 100.0%; Pred. No. 6.9e-15; 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0; 5 CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49 1	Fax: 82-42-860 Email: doil@ma High quality s Locat 1. 1 /orga /mol /cult /db_x /dev /clor	BM067231  KS08001E12 KS08 C BM067231  BM067231.1 GI:22 EST.  Capsicum annuum Capsicum annuum Capsicum annuum Eukaryota; Viridi Spermatophyta; Ma asterids; lamiids 1 (bases 1 to 12 Lee,S., Kim,SY. Hur,CG. and Chc Generation of Exp annuum L.) and Se Response Against Unpublished (2001 Contact: Doil Chc Genome Research C Korea Research In P.O. Box 115, Yus Tal. 82-42-860-43	18 34.0 909 9 CG281996  18 34.0 915 9 CC708421  18 34.0 915 9 CC708421  18 34.0 959 2 BE421380  18 34.0 959 2 BE421380  17 32.1 268 2 BB087806  17 32.1 398 6 CD483766  17 32.1 639 1 AL896412  17 32.1 669 1 AL651847  17 32.1 669 1 AL651847  17 32.1 720 7 CX183518  17 32.1 730 8 CX259339  17 32.1 730 8 BX240998  17 32.1 844 8 CC431250  17 32.1 844 8 CC431250  17 32.1 930 8 BZ667152  17 32.1 980 9 CNS06JOW  ALIGNMENTS  ALIGNMENTS  CC708421 OGULP54TH  BE421380 HWM008.G0  CC281990 OG3DG39TH  BE421380 HWM008.G0  CC483766 atrol-4ms  W31931 zb97h08.rl  BH004925 BMBAC08N0  AL896412 AL651847  AL651847 AL651847  AL651847 AL651847  AG179628 Pan trogl  CC431250 CC431250  CC431250 CC431250  CC431250 PUEFG48TD  CC431250 PUEFG48TD

```
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT :
BB44016:
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                            Takanabe,S., Yamamu...,
Yoshida,K., Yoshiki,A.,
Yokota,T., Yoshida,K., Yoshiki,A.,
Hayashizaki,Y.
RIKEN Mouse ESTS (Konno,H., et al.)
Unpublished (2000)
Contact: Yoshihide Hayashizaki
Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Jaj
Tel: 81-45-503-9216
Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/Carninci,P., Nishiyama,Y., Westover,A., Itoh,M., Nagaoka,S.,
Sasaki,N., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Thermostabilization and thermoactivation of thermolabile enzyme trehalose and its application for the synthesis of full length CDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
Itoh,M., Kitsunai, T., Akiyama,J., Shibata,X., Izawa,M., Kawai Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M.,
Okazaki,Y. and Hayashizaki,Y.
Automated filtration-based high-throughput plasmid preparatic Genome Res. 9 (5), 463-470 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Konno, H., Aizawa, K., Akahira, S., Akiyama, J., Arakawa, T., Carninci, P., Endo, T., Fukuda, S., Fukunishi, Y., Hara, A., Hayatsu, Hirozane, T., Hori, F., Ishii, Y., Ishikawa, J., Ishikawa, T., Itoh, N., Izawa, M., Kadota, K., Kagawa, I., Kai, C., Kawai, J., Kikuchi, N., Kiyosawa, H., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Matsuyama, T., Miki, R., Mizuno, Y., Nakamura, M., Oda, Okazaki, Y., Ono, T., Owa, C., Saito, H., Sakai, C., Sato, K., Shibata, K., Shibata, Y., Shigemoto, Y., Shinagawa, A., Shiraki, T., Sogabe, Y., Sugahara, Y., Suzuki, H., Suzuki, H., Tagawa, A., Takahashi, F., Tominaga, N., Toya, T., Tsunoda, Y., Watahiki, A., Watanabe, S., Yamamura, T., Yamanaka, I., Yano, R., Yasunishi, A., Yokota, T., Yoshida, K., Yoshiki, A., Yoshino, M., Muramatsu, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                   system. Genome Res. (Carninci, P. and Haya
High-efficiency ful:
19-44 (1999)
Please visit our wel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota;
Mammalia; E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BB440162.1
EST.
Mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequenc
BB440162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0162 RIKEN
clone D030
                                        details.
prepared by using trehalose thermo-activated transcriptase and subsequently enriched for f cap-trapper. Second strand cDNA was prepared
                                                                                                                                                                                                                                                                                                organism="Mus musculi
/mol_type="mRNA"
/db_xref="taxon:10090
                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Metazoa;
Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 287 bp mRNA
KEN full-length enriched, 9 days
D030020I06 3' similar to L19932 I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:9282774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (house
                                                                                                                                                                                                                                                                                                                                                                                                                      web
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                       site
                                                                                                                                                                                                                                                                                                                                      musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                    (http:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ďq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                    /genome
                                                                                                                                                                                                                                                                                                                                                                                                                       rtc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
s embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arakawa,T.,
, Hara,A., Hayatsu,N.,
Ishikawa,T., Itoh,M.,
,J., Kikuchi,N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   preparation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                     ful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .riken.jp/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ig-h3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   e enzymes
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kawai,J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oda,
     le
le
le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus
                                                                                                    Bea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z .
                                                             Bem
                       γq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γď
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
BB006007
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Konno, H., Aizawa, K., Akahira, S., Akiyama, J., Arakawa, T., Carninci, P., Endo, T., Fukuda, S., Fukunishi, Y., Hara, A., Hayatsu, N., Hirozane, T., Hori, F., Ishii, Y., Ishikawa, J., Ishikawa, T., Itoh, M., Izawa, M., Kadota, K., Kagawa, I., Kai, C., Kawai, J., Kikuchi, N., Kiyosawa, H., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Matsuyama, T., Miki, R., Mizuno, Y., Nakamura, M., Oda, H., Okazaki, Y., Ono, T., Owa, C., Saito, H., Sakai, C., Sato, K., Shibata, Y., Shibata, Y., Shigemoto, Y., Shinagawa, A., Shiraki, T., Sogabe, Y., Sugahara, Y., Suzuki, H., Suzuki, H., Tagawa, A., Shiraki, T., Takahashi, F., Tominaga, N., Toya, T., Tsunoda, Y., Watahiki, A., Yokota, T., Yoshida, K., Yoshiki, A., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.

RIKEN Mouse ESTB (Konno, H., et al.)

L Unpublished (2000)
                                                                                                                                                    Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/Carninci,P., Nishiyama,Y., Westover,A., Itoh,M., Nagaoka,S., Sasaki,N., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Thermostabilization and thermoactivation of thermolabile enzymes by trehalose and its application for the synthesis of full length cDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J., Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki,Y. and Hayashizaki,Y.
Automated filtration-based high-throughput plasmid preparation system. Genome Res. 9 (5), 463-470 (1999)
Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning. Methods Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BB006007
BB006007.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Yoshihide Hayashizaki
Laboratory for Genome Exploration Research Group, RIKEN
Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-
Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          musculus cDNI
transforming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BB006007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 n 37.7%;
Similarity 100.0%;
20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAAATCTGAATCAACCAGT 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACAAATCTGAATCAACCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                musculus
                                                                                                               details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288 bp mRNA linear EST 22-JUN-2000 RIKEN full-length enriched, 10 day neonate skin Mus cDNA clone 4732469F24 3' similar to NM 009369 Mus musculus ning growth factor, beta induced, 68 kDa (Tgfbi), mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus m
/mol_type="mRNA"
/strain="C57BL/6
                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eutheria;
1 to 288)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:8095422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (house
                                                                                                                                   web
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              o
;-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20;
Pred. No.
                                                                                                                                   site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                   (http://genome.rtc.riken.go.jp)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₩
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                   Kawai, J.,
                                                                                                                                                                                                                                                                                                                                                                                     enzymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FLC I."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mug
                                                                                                                                                                                                                                                                                                                                                                                   γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
Query Match
Best Local
                                                                                                                                                                       Carninci, P., Endo, T., Fukuda, S., Akiyama, J., Arakawa, T., Carninci, P., Endo, T., Fukuda, S., Fukunishi, Y., Hara, A., Hayatsu Hirozane, T., Hori, F., Ishii, Y., Ishikawa, J., Ishikawa, T., Itoh, Izawa, M., Kadota, K., Kagawa, I., Kai, C., Kawai, J., Kikuchi, N., Kiyosawa, H., Kojima, Y., Kondo, S., Koya, S., Kurihara, C., Kusakabe, M., Matsuyama, T., Miki, R., Mizuno, Y., Nakamura, M., Oda Okazaki, Y., Ono, T., Owa, C., Saito, H., Sakai, C., Sato, K., Shibata, K., Shibata, Y., Shigemoto, Y., Shinagawa, A., Shiraki, T., Sogabe, Y., Sugahara, Y., Suzuki, H., Suzuki, H., Tagawa, A., Takahashi, F., Tominaga, N., Toya, T., Tsunoda, Y., Watahiki, A., Watanabe, S., Yamamura, T., Yamanaka, I., Yano, R., Yasunishi, A., Yokota, T., Yoshida, K., Yoshiki, A., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.

RIKEN Mouse ESTs (Konno, H., et al.)

Unpublished (2000)

Contact: Yoshihide Hayashizaki

Tohorome Froloration Research Group, RIKEN Genomic
                         Sciences Center (GSC), Yokol
The Institute of Physical a
1-7-22 Suehiro-cho, Tsurumi
Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BB494132 RIKE BB494132 RIKE musculus cDNA ig-h3) mRNA, BB494132 GEST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota;
Mammalia; F
                        Fax:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BuM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
                                                                                                                                                                Laboratory for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAAATCTGAATCAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                316 bp mRNA
RIKEN full-length enriched, 13 d
cDNA clone D530037K16 3' similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Site_1: SalI; Site_2: BamHI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Rik Genomic Sciences Center and Genome Science Laborato RIKEN. Division of Experimental Animal Research in Control of Control of Experimental Animal Research in Control of Control of Experimental Animal Research in Control of Contro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /sex="mixed"
/tissue_type="skin"
/dev_stage="10 days neonate"
/lab_host="DH10B"
/clone_lib="RIKEN full-length enriched,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xre/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xref="taxon:10090"
ne="4732469F24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lambda FLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 945275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Division of Expo
     s@gsc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouse)
                                                                                 ne Exploration Research
, Yokohama Institute
/sical and Chemical Rese
Tsurumi-ku, Yokohama, F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 18;
Pred. No.
     riken.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
    jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Akiyama, J., Arakawa, T., Fukunishi, Y., Hara, A., Haya Ishikawa, J., Ishikawa, T., Ito Kai, C., Kawai, J., Kikuchi, N., Koya, S., Kurihara, C.,
    URL:http:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
18;
                                                                                    Research (R
na, Kanagawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               days embryo
mr to L19932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
//genome
                                                                                                                                                                   Group,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Science Laboratory in 
lmal Research in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
     .gsc
                                                                                     230-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    strand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 25-J
stomach
Mouse (k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               day
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi
Murinae; Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A., Hayatsu,N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3′],
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in Riken
                                                                                     0045,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-JUL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             neonate
                                                                                                                                                                          Genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (beta
                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oda, H.
                                                                                     Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

ACCESSION VERSION KEYWORDS SOURCE

ORGANISM

REFERENCE AUTHORS

멍

S

TITLE JOURNAL COMMENT

Research

(IPK)

RESULT 4
BB494132
LOCUS
DEFINITION

뮍

Ş

Matches

ORIGIN

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
CA016832/
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       y Match
Local Similarity 100.0%;
hes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>a</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci, P., Nishiyama, Y., Westover, A., Itoh, M., Nagaoka, S., Sasaki, N., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Thermostabilization and thermoactivation of thermolabile enzymer trehalose and its application for the synthesis of full length cDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
Itoh, M., Kitsunai, T., Akiyama, J., Shibata, K., Izawa, M., Kawai Tomaru, Y., Carninci, P., Shibata, Y., Ozawa, Y., Muramatsu, M., Okazaki, Y. and Hayashizaki, Y.
Automated filtration-based high-throughput plasmid preparationsystem. Genome Res. 9 (5), 463-470 (1999)
Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning. Methods Enzymol. 30 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65
                                                                                                                                                                                                                                                                                                                                                                                CA016832
HV05N02u
3-PRIME,
CA016832
CA016832.
Molecular
Institute
                                                                                                                                 Zhang, H., Graner, A.
                                                                                                                                                                                             Hordeum vulgare subsp. vulgare
Hordeum vulgare subsp. vulgare
Eukaryota; Viridiplantae; Streptophyta; En
Spermatophyta; Magnoliophyta; Liliopsida;
Pooideae; Triticeae; Hordeum.
1 (bases 1 +0 470)
                                                                           Barley ESTs
Unpublished
                                                    Contact: Stein Nils
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Please
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACAAATCTGAATCAACCA 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAAATCTGAATCAACCA 27
                                                                                                                                                                                          (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     visit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          details
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 prepared and sequenced in Mouse Genome Encyclopedia
Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory
RIKEN. Division of Experimental Animal Research in Ril
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Site_1: Sall; Site_2: BamHI; cDNA library prepared and sequenced in Mouse Genome Encycloped Project of Genome Exploration Research Group in I Genomic Sciences Center and Genome Science Laboration Research Control Co
                                                                                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HV Hordeum vulgare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
Markers Group, Department (
of Plant Genetics and Crop
                                                                                                                                                               Potokina, E.,
                                                                                                                                                                                           1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dev stage="13 days embryo"
lab_host="DH108"
clone_lib="RIKEN full-length enriched,
tomach"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tissue_type="stomach"
dev_stage="13 days em]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clone="D530037K16
                                                                              from (2002)
                                                                                                                                                                                                                                                                                                                                                                                       GI:24294176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _type="mRNA"
xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  our web site
                                                                                                      germinating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 18; Pred. No. 18; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                Michalek, W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                428 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (http://genome.rtc.riken.go.jp)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  subsp.
                                                                                                          seeds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mouse tissues. 1st strand cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vulgare
Genbank
p Plant !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ٧.
                                                                                                                                                                  Weschke, W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                Embryophyta; Traci
a; Poales; Poaceae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vector: a modific
sion from Lambda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear EST 23-OCT-2002 cDNA clone HV05N02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plasmid preparation
                                                                                                                                                                     Stein, N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 days
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    full-length with the
                                                                                                                                                                                                                                                                           Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3′],
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      reverse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           enzymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kawai,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FLC I."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            β
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
CA017649
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 34.0%;
Best Local Similarity 100.0%;
Matches 18; Conservative
CA017649

ON HVUGN02r HV Hordeum.
5-PRIME, mRNA sequence.
ON CA017649

CA017649.1 GI:24294993

SET.
Hordeum vulgare subsp. vulgare
Eukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheop...
Spermatophyta; Magnoliophyta; Lillopsida; Poales; Poaceae;
Pooideae; Triticeae; Hordeum.

1 (bases 1 to 500)
HORS Zhang, H., Potokina, E., Michalek, W., Weschke, W., Stein, N. and Graner, A.
Barley ESTs from germinating seeds
URNAL Unpublished (2002)
ENT Molecular Markers Group, Department Genbank
Molecular Markers Group, Department Genbank
Molecular Markers Group, Department Genbank
Torrensstr. 3, 06466, Gatersleben, Germany
Tel: 039482-5552
Fax: 039482-5552
Fax: 039482-5552
Email: stein@lpk-gatersleben.de
Insert Length: 500 Std Error: 0.00

""are: Misrev."
""ar: Misrev."
""are: Misrev."
""are: Misrev."
"" vulgare subsp. vulgare"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                    Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Corrensstr. 3
Tel: 039482-5
Fax: 039482-5
Email: stein@
Insert Length
Plate: 5 row
Seq primer: M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAATCTGAATCAACCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAATCTGAATCAACCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nsstr. 3, 06466, Galeria
039482-5522
039482-5595
: stein@ipk-gatersleben.de
t Length: 428 Std Error: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="germinating seeds"
/dev_stage="germinating seeds (48-96 h)"
/lab_host="XL10-Gold"
/clone_lib="HV"
/clone_lib="KIL10-Gold"
/clone_lib="KI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cultivar="mRNA"
/sub_species="vulg;
/db_xref="GABI:349]
/db_xref="+=""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sub_species="vulgare"
/db_xref="GABI:349120"
/db_xref="taxon:112509"
/clone="HV05N02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Hordeum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M13uni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 18; DE Pred. No. 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gatersleben,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      vulgare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     subsp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      wulgare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        T 23-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ595418
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              452
                                                                                                                                                                                                                                                                                     Contact: Weisshaar B
ADIS DNA core facility at Max-Planck-Institute for Pl
Carl-von-Linne Weg 10, 5082
Fax: 00492215062851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ595418
E012691-024-0
CDNA clone 02
BQ595418
BQ595418.1 0
                                                                                                                                                                                                                                   Email:
Insert
Plate:
                                                                                                                                                                                                                                                                                                                                                       22362189
12472698
Contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophyllales; Amaranthaceae; Beta.

1 (bases 1 to 597)

Herwig, R., Schulz, B., Weisshaar, B., Hennig, S., Steinfath, M., Drungowski, M., Stahl, D., Wruck, W., Menze, A., O'Brien, J., Lehrach, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
                                                                                                                                                                                              Email: weisshaa@mpiz-koeln.mpg.de
Insert Length: 597 Std Error: 0.00
Plate: 22 row: C column: 22
Seq primer: SP6; CATACGATTTAGGTGACACTATAG
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Beta
                                                                                                                                                                                                                                                                                                                                                                                                            Construction of a 'unigene' cDNI fingerprinting allows access to Plant J. 32 (5), 845-857 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Radelof, U.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Beta vulgaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          n 34.0%;
Similarity 100.0%;
l8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAATCTGAATCAACCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAATCTGAATCAACCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vulgaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="germinating seeds"
/dev_stage="germinating seeds (48-96 h)"
/lab_host="XL10-Gold"
/clone_lib="HV"
/clone_lib="HV"
/note="Vector: pBluescript SK+; Site_1: EcoRI (5'-end of cDNA); Site_2: XhoI (3'-end of cDNA); Roots were grown for two days on filter paper at room temperature. Due to a cloning artefact caused by the kit, in most cases the EcoRI site is NOT present, as well as the EcoRIadapter used for cloning. To excise the insert, restriction sites upstream EcoRI should be used (e.g. BamHI, SalI, PstI).
NOTE: Also due to the cloning system used Blue/white selection for recombinats is not 100% reliable.Average insert size is 1 kb"
                                                                                                     /cultiv
                                                                                                                         /organism="Beta vulgaris"
/mol_type="mRNA"
/cultivar="KWS2320 (doubl
tissue_type="developing root"
/lab_host="EMDH10B"
/clone_lib="MPIZ-ADIS-024-developing
                                                    /db_xref="GABI:191436"
/db_xref="taxon:161934
/clone="024-022-C22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="HV05N02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sub_species="vulgare"
/db_xref="GABI:267679"
/db_xref="taxon:112509"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              597 bp mRNA linear
4-022-C22-SP6 MPIZ-ADIS-024-developing
024-022-C22 5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:26125001
                                                                                                                                                                                     . 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ,;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 18; DB
Pred. No. 18
0; Mismatches
                                                                                                                                                                                                                                                                                                       at MPIZ
or Plant
50829 Kc
                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA clone
s to 25 000
                                                                                                                              (double
                                                                                                                                                                                                                                                                                                         Koeln,
                                                                        34"
                                                                                                                                                                                                                                                                                                         Breeding Res
beln, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ა.</u>
                                                                                                                            haploid,
                                                                                                                                                                                                                                                                                                                                                                                                                                set by oligonucleotide potential sugar beet g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
                                                                                                                                                                                                                                                                                                                           Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                             monogerm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     root Beta vulg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>
                                                                                                                              breeding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lehrach, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -DEC-2002
vulgaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
```

```
RESULT 8
BM333093/c
LOCUS
DEFINITION
                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                                                                                                   BACKWARD:
Seq prime:
                                                                                                                                                                                                                                                                                                                  Phred software, (<a href="http://depts.washington.edu/ventures/collabtr/direct/index.htm>#brt). Overall sequence quality assessment and vector trimming were conducted using the Lucy software (<a href="http://www.tigr.org/softlab/>">http://www.tigr.org/softlab/></a>). Lucy parameters were set to ensure an overall trimmed quality of 97.5% or better without any vector fragments in the chosen high-quality region of each sequence. Low-quality bases between the poly-T and the high-quality region were replaced with N's to serve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact:
Schnable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34.
Similarity 100
18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wen, T.J., Qiu, F., Guo, L., Ashlock
Expressed Sequence Tags from B73
including seedlings treated with
Unpublished (2001)
Contact: Patrick S. Schnable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence.
BM333093
BM333093.1 GI:18163254
EST.

Zea mays
Zea mays
Zea mays
Zea mays
Sea mays
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Paccheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Paccanopogoneae; Panicoideae; Andropogoneae; Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G405 Agronomy, Iowa State Universit
Tel: 515-294-0975
Fax: 515-294-2299
Email: schnable@iastate.edu
Individual basecall and confidence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Iowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BM333093
MEST183-H08
                                                                                                                                                                                                                                                                          FORWARD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATCTGAATCAACCAGTG
                                                                                                                                                                                                                                                                                                          spacers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases
                                                                                                                                                                                                            WARD: primer T7-1 (AA TAC

WARD: primer T3 (ATT AAC

primer: primer T3 (ATT AAC

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Agronomy, Iowa s
                                                                                                                                                                                                                                                                                           PRimers
                   /db_xref="taxon: 45 / , /clone="MEST183-H08"
/tissue_type="mixed"
/lab_host="DH108"
/clone_lib="ISUM5-RN"
/note="Vector: pT7T3PA
                                                                                                                           /organism="Zea mays"
/mol_type="mRNA"
/cultivar="B73"
/db_xref="taxon:4577"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            orientation:
SP6-SalI-CCACGCGTCCG-5prime-cDNA-polyA-CC-NotI-T7;
SP6-SalI-CCACGCGTCCG-5prime-cDNA-polyA-CC-NotI-T7;
Sequencing granted in the context of the GABI-Beet
project, local PI: Dr. Katharina Schneider, coordin
Prof. Christian Jung; Sequence submission managed
RZPD/GABI-Primary database: http://gabi.rzpd.de"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Vector: pCMVSPORT6; Site 1: SalI; Site 2: NotI cDNA library from sugar beet, library provided by KWS Kleinwanzlebener Saatzucht AG Einbeck, Germany, contact b.schulz@kws.de; cloning sites SalI-NotI, primer sites
                  Tissues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
T3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              t
O
                                                                                                                                                                                                    809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ISUM5-RN
ector: pT7T3PAC;
Germinated seed
ture tissures (:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :y
State
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ore 18; DB:
red. No. 18;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                University,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ashlock, D.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                AC GAC TCA CTA TAG)
AC CCT CAC TAA AG)
AAC CCT CAC TAA AG)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mays
; Site_1: EcoRI; d and seedlings (17, 21, 38, 69,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ថ្ងា
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maize:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ).A and Schnable, P.S
lize: various stages
variety of hormones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          value
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear EST MEST183-H08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       assigned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50011-1010,
; Site_2: N
(1, 2, 8,
, 77 DAG),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         coordinator:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NotI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 act
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

REFERENCE AUTHORS TITLE

COMMENT

JOURNAL

FEATURES

Mixed mature

primer

 $T_3$ 

ACCESSION VERSION KEYWORDS SOURCE

ORGANISM

멍

Ś

ORIGIN

Query Ma Best Loc Matches

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 9
BM347598/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  al
                                                                                                                                                               G405 Agronomy, Iowa State Uni
Tel: 515-294-0975
Fax: 515-294-2299
Email: schnable@iastate.edu
Individual basecall and confi
Phred software,
                                                                                                                                                                                                                           Unpublished (2001)
Contact: Patrick S.
Schnable Laboratory
Iowa State Universit
G405 Agronomy, Iowa
G405 Agronomy, Iowa
Tel: 515-294-0975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17
                                                                                                                                                                                                                                                                                                                                      Wen, T.J.,
Expressed
                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Viridiplantae; Streptophyta; El
Spermatophyta; Magnoliophyta; Liliopsida;
clade; Panicoideae; Andropogoneae; Zea.
                                                        (<a href="http://depts.washington.edu/ventures/collabtr/direct/index.htm>#brt). Overall sequence quality assessment and vector trimming were conducted using the Lucy software (<a href="http://www.tigr.org/softlab/">http://www.tigr.org/softlab/</a>). Lucy parameters were set to ensure an overall trimmed quality of 97.5% or better without any vector fragments in the chosen high-quality region of each sequence. Low-quality bases between the poly-T and the high-quality region were replaced with N's to serve
                                                                                                                                                                                                                                                                                                                      including
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 100
8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ST279-G08.T3
                                                                                                                                                                                                                                                                                                                                                                      (bases
                            PRimers
                                                                                                                                                                                                                                                             State University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98
            primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       resulting DNA:RNA hybrid was treated with RNase H and used as a template for DNA PolI-catalyzed second strand synthesis. After the addition of EcoRI adaptors, the ds-cDNAs were digested with NotI and size-selected. The resulting molecules were directionally cloned into the EcoRI and NotI sites of the pT7T3PAC vector. The library then went through one round of normalization to CoT value of 5 based on the methods of Marcelo Bento Soares (Genome Research 6: 791-806, 1996)."
                                                                                                                                                                                                                                                                                                                         Qiu, F., Guo, L., Ashlock, D.A and Sequence Tags from B73 Maize: va. seedlings treated with a variety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:18172210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ISUM5-RN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 00.0%;
            T7-1
(AA
(ATT
                                                                                                                                                                                                                                                                                            Schnable
                                                                                                                                                                                                                                            State University, Ames,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zea
                                                                                                                                                                                    confidence
TAC
AAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           611 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.
 CAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    che
 TCA
CAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA
                                                                                                                                                                                    value
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
 CTA TAG)
TAA AG)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                         nd Schnable,P.S.
various stages
ety of hormones
                                                                                                                                                                                                                                                                                                                                                                                                     Embryophyta; Tracheophyta;; Poales; Poaceae; PACCAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 608;
                                                                                                                                                                                    were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear EST
MEST279-G08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                 IA
                                                                                                                                                                                    assigned using
                                                                                                                                                                                                                                              50011-1010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-JAN-2002
3', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                       tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and used
                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
7:
```

멍

SOURCE

Ś

ORIGIN

CCT

CAC

TAA AG)

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                               RESULT 10
AG223668
LOCUS
                                                                                                                                                                                                                                                                                    뮹
                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                TITLE
JOURNAL
                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                    320
                                                                                                                                                                         survey sequence.
AG223668
AG223668.1 GI:26
GSS.
                                  Sato, S.
Direct
                                                                                                                                                                                                                                                                                                                              18;
Direct Submission
Submitted (20-NOV-2002) Sh
The First Laboratory for P
Kazusa-kamatari, Kisarazu,
                                                      Sato, S., Nakamura, Y. and Tabata, S
Lotus japonicus BAC End sequences
Published Only in Database (2002)
2 (bases 1 to 627)
                                                                                                            Lotus
                                                                                                                   Lotus corniculatus var. japonicus (Lotus japonicus)
Lotus corniculatus var. japonicus
Lotus corniculatus var. japonicus
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheoph
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Loteae;
                                                                                                                                                                                                                                                                                                                         n 34.0%;
Similarity 100.0%
18; Conservative
                                                                                                                                                                                                                                                                                   TGAATCAACCAGTGCTGG
||||||||||||||
TGAATCAACCAGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prime
                                                                                                                                                                                                                                                                                                                                                                         corniculatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="mixed"
/lab_host="DH10B"
/clone_lib="ISUM5-RN"
/note="Vector: pT7T3PAC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cultivar="B73"

db_xref="taxon:457

clone="MEST279-G08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Zea
                                                                                                                                                                                      GI:265323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nue_type="mixed"
host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         type="mRNA"
                                                                                                                                                                                                                     var.
                                                                                                                                                                                                                                                                                    303
                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                          Score 18; DB
Pred. No. 18;
0; Mismatches
                                                                                                                                                                                                                   627 bp
japonicus
  Shusei Sato, Kazusa D
C Plant Gene Research;
Zu, Chiba 292-0818, Ja
                                                                                                                                                                                                                     DNA,
                                                                                                                                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                    clone
                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                 Length
     Japan
              DNA :
                                                                                                                                                                                                                  linear GSS
e:LjB09d22_r,
                                                                                                                                                                                                                                                                                                                              Indels
              Research
-6-7
                                                                                                                                          Tracheophyta;
                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                             Gaps
                          Institute,
                                                                                                                                                                                                                    genomic
                                                                                                                                                                                                                                                                                                                             0
```

```
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
BI271889/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INITION
                                                                                                                                                                                                                                                                                                                             Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BI271889
BI271889.1
                                                                                                                                                                                                                                                                                                                                                                                                                             2510
Tel:
Fax:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Torres-Jerez, I., Scott, A.D., Harris, A.R., Gonzales, R.A., Flores, H.R., Inman, J.T., Weller, J.W. and May, G.D. Expressed Sequence Tags from the Samuel Roberts Noble Fo Medicago truncatula flower library Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; T. Spermatophyta; Magnoliophyta; eudicotyledons; core eud rosids; eurosids I; Fabales; Fabaceae; Papilionoideae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BI271889
NF014E05FL1F1038 Developing flower
NF014E05FL 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (E-mail:ssato@kazusa.or.jp,
Tel:81-438-52-3935(ex.2336),
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: May GD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Medicago.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Medicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Medicago truncatula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCATGGACAAATCTGAA
                                                                                                                                                                                                                                                                                                                                                           Samuel Roberts Noble
                                                                                                                                                                                                                                                                                                                                                                                                                             Sam
580
580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34.0%;
larity 100.0%;
Conservative
/clone="NF014E05FL"
/tissue_type="Developing flowers"
/dev_stage="Developmentally pooled. Contains a mixture of
/dev_stage="Developing, fully-opened flowers and flowers
in early transition into pods."
/clone_lib="Developing flower"
/note="Vector: Lambda Zap; cDNA was prepared from polyA+
enriched, pooled samples of equivalent amounts of total
RNA from very young, developing, fully-opened flowers and
flowers transitioning into pods. The cDNA was
directionally ligated into the Uni-Zap XR vector
(Stratagene) and packaged using the Gigapack III Gold
packaging extracts. Phagemids containing cDNA inserts were
in vivo excised from the recombinant Uni-ZAP XR vector
using ExAssist helper phage and the E. coli strain
                                                                                                                                                                                                                                                                                                                                                                                                                             224 6650
224 6692
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Noble Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   truncatula
                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="LjB09d22_r"
/clone_lib="genomic BAC library"
/note="VECTOR:pBeloBAC11~synonym:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mol_type="genomic DNA"
/strain="Miyakojima MG-20"
/variety="japonicus"
/db_xref="taxon:34305"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Lotus corniculatus mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                         organism="Medicago truncatula"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:14880751
                                                                                                                                                                                                                                                                         xref="taxon:3880"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (barrel medic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ک</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ardmore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Foundation Ardmore, OK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               URL:http://www.kazusa.or.jp/en/plant/,
, Fax:81-438-52-3934)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                                                                                                                                                                                                                                                               0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Medicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                73402,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                var.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lotus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          truncatula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              japonicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             japonicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Foundation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Trifolieae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bell, C.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8-JUL-
                                                                                                                                                                                                                        O
H
                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,</u>
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
BX752014
LOCUS
RESULT 13
CK185060
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                         멍
                                                                                               $
                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                       Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mat
                                                                                                                                                                                                                                                                                                                                         Hinxton, Cambridgeshire, CB10 1SA, UK
Email: trop@sanger.ac.uk
Sanger Xenopus tropicalis EST project 2001
TROPICALIS_SEQUENCE_ID: TGas076c13.q1kT7
Sequencing_primer: T7
This sequence is from a Xenopus Gene Collectic constructed by Aaron M. Zorn.
cDNA was oligo dT primed from Sug of poly A+ F gastrulae. EcoRI-NotI cut cDNA was then ligate EcoRI at the 5' end and NotI at the 3' end.
Vector: pCS107; Site_1: EcoRI; Site_2: NotI Host: Escherichia coli XL1- blue.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; C
Amphibia; Batrachia; Anura; Mes
Xenopodinae; Xenopus; Silurana.
1 (bases 1 to 688)
Croning, M.D.R., Ashurst, J.L., T
Sanger Xenopus tropicalis EST p
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C<sub>D</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence.
BX752014
BX752014.1 GI
EST.
Xenopus tropic
Xenopus tropic
                                                                         32
CK185060
EST774375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34.0%;
Similarity 100.0%;
18; Conservative
                                                                                                                         18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Croning MDR Sanger Institute
                                                                                                                       Similarity
18; Conserv
                                                                                                 w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BX752014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATCCATGGACAAATCTG
                                                                       TCCATGGACAAATCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tropicalis
tropicalis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         XGC-gastrula Xenopus
                                                                                                                                                                                    /clone="TGas076c13"
/dev_stage="gastrula (stages 10.5-12 mixed)"
/lab_host="Escherichia coli XL1-blue"
/clone_lib="XGC-gastrula"
/note="Vector: pCS107; Site_1: EcoRI; Site_2: Not was oligo dT primed from 5ug of poly A+ RNA from 10-13 gastrulae. EcoRI-NotI cut cDNA was then liinto pCS107 with EcoRI at the 5' end and NotI at end."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XL1-Blue MRF' using SOLR ce
                                                                                                                       34.0%;
ty 100.0%;
ervative (
                                                                                                                                                                                                                                                                                           organism="Xenopus tropicali
/mol_type="mRNA"
/db_xref="taxon:8364"
 BEA
                                                                                                                                                                                                                                                                                                                                 .688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:39642082
Boophilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (western
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            !F' (Stratagene).
cells."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Anura; Me
Silurana
                                                                         349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ,
,
                                                                                                 20
                                                                                                                   Score 18; up
Pred. No. 18;
0; Mismatches
                                                                                                                        ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 18; DB Pred. No. 18; 0; Mismatches
688 bp
microplus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a; Craniata; Ve;
Mesobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clawed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp .....s tropicalis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Taylor, R., Zorn, A.M. project 2001 (11_200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18
18
                                                                                                                                   DB
18/
mRNA
CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                               <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Excised
clone
                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                          ly A+ RNA
ligated i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vertebrata; ia; Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
linear Eg
e BEAC260,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plasmids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _2003
                                                                                                                                              688;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          σ
                                                                                                                                                                                                                                                                                                                                                                                           into F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29;
                                                                                                                                                                                                                                                                                                                                                                                                                                (XGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostomi;
; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 09-DEC-2003
TGas076c13 3',
          EST
                                                                                                                                                                                                                                                                                                                                                                                           m stages
pCS107 v
                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
ST 01-JUL-:
                                                                                                                                                                                                                                                                                                                                                                                                                                 library
                                                                                                                                                                                                                                Not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rogers, J
                                                                                                                                                                                                     om stages
ligated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                       Gaps
                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plated
                                                                                                                                                                                                                                                                                                                                                                                              with
                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                          멍
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
CB634510/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                           JOURNAL COMMENT
                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Loc
                                                                                                                                                                                                                                                                                    CB634510 701 bp mR
N OSIIEb14B06.f OSIIEb Oryza sativa (in-
clone OSIIEb14B06 5', mRNA sequence.
CB634510
CB634510.1 GI:29629501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The Institute for Gene 9712 Medical Center D: Tel: 301-610-5968
Fax: 301-838-0208
Email: nene@tigr.org
Seq primer: M13 forwar
                            Contact: Rod Wing
Arizona Genomics Institutiona
University of Arizona
Biological Sciences Web
85721-0088, USA
Tel: 520 626 3967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ω
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence.
CK185060
CK185060.1
EST.
Boophilus m
                                                                                     1 (bases 1 to 701)
1 (bases 1 to 701)
Jantasuriyarat, C., Lu, G., Gowda, M., Hatfield, J., Zho Kudrna, D., Dean, R., Soderlund, C., Wing, R. and Wang, Carge-scale identification of ESTs involved in the between rice and Magnaporthe grisea
Unpublished (2003)
Contact: Rod Wing
Contact: Rod Wing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Vishvanath Nene
Parasite Genomics
The Institute for Genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nene, V., Quackenbush, J., Georg
An index of genes transcribed
Unpublished (2004)
                                                                                                                                                                                                             Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
18; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Arthropoda; Che
Parasitiformes; Ixodida; Ixodidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Boophilus microplus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTCGTAACCGTCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCGTAACCGTCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases
   520 626
520 621
1: http:/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ESTs: EST774376
http:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Organ: Whole ticks and dissected organs; Vector: pExpress 1; A normalized cDNA library was custom built by Express Genomics. Oligo-dT primed cDNA was directionally cloned into NotI-EcoRV site of pExpress 1. Universal M13 primers were used to generate 5' and 3' EST data."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           r: M13 forward.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="Organ:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:6941"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="BEAC260"
/dev_stage="Adult and larvae"
/lab_host="E. coli strain DH1
/clone_lib="BEA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Boophilus microplus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        microplus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 to 688)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:49565594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 688
                  9288
  /genome.arizona.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34.0%;
100.0%;
cive (
                                                                                                                                                                                                 Oryzeae;
701)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drive,
                                                              West,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (southern
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51
                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               George, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Research
Rockville,
                                                              448A,
                                                                                                                                                                                                                                                                                                                                                   satīva (indica cultivar-group)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         che
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chelicerata;
ae; Boophilus.
                                                               ש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB;
18;
                                                              .
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and Guerrero, F.
ne tick Boophilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DH10B-TonA"
                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tick)
                                                              Box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 688;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20850,
                                                              210088,
                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arachnida;
                                                             Tucson,
                                                                                                                                                                                  Zhou, B.,
                                                                                                                                                      interaction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 microplus
                                                                                                                                                                                                                                                                                                                                                                    EST 08-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acari;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                              ΑZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           γģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

C

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 19
CC501966,
LOCUS
                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                     E 1 (bases 1 to 713)

E 1 (bases 1 to 713)

S Holt,R., Stott,J., Yang,G., Barber,S., Smailus,D., Prabhu,A.-L.,
Tsai,M., Cloutier,A., Lee,D., Girn,N., Olson,T., Mayo,M.,
Butterfield,Y., Kirkpatrick,R., Liu,J., Guin,R., Chan,A., Chiu,R.,
Mathewson,C., Wye,N., Masson,A., Brown-John,M., Jones,S.,
Schein,J., Marra,M., de Jong,P., McWilliam,S., Barris,W.,
Ballymple,B.P. and Tellam,R.

Bovine BAC End Sequences from Library CHORI-240, PLATES 294 to 398

Unpublished (2003)
Other_GSSs: CH240_340H21.TARBAC13P2
Contact: Rob Holt
Sequencing
The British Columbia Cancer Agency Genome Science Centre
600 W. 10th Ave, Vancouver, British Columbia, Canada V5Z 4E6
Tel: 604-877-6276
Email: rholt@bcgsc.ca
Clones are derived from the bovine BAC library CHORI-240
(http://www.chori.org/bacpac/bovine240.htm). For BAC library
availability, please contact Pieter de Jong (pdejong@mail.cho.org).
Clones may be purchased from BACPAC Resources
(http://www.chori.org/bacpac/ordering_information.htm). This work
was undertaken as part of the International Bovine BAC Mapping
Consortium (IBBMC) by CSIRO Livestock Industries, Australia and the
British Columbia Genome Sciences Centre, Canada.
Plate: 340 row: H column: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CC501966
CH240 340H21.T7 genomic survey successive CC501966
CC501966.1 GI:3
CC501966.1 GI:3
CSS.
Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bos taurus
Eukaryota; Met
Mammalia; Euth
Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCR PRimers
FORWARD: gta
BACKWARD: gg
Plate: 14 r
Seq primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ማ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34.0%;
Similarity 100.0%;
8; Conservative
                                                 eq primer: T7
lass: BAC ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGACAAATCTGAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGACAAATCTGAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CWARD: gga aac agc tat gac cage: 14 row: B column: 06 primer: gta aaa cga cgg cca Location/Qualifiers
1. .701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:39946"
/clone="OSIIEb14B06"
/tissue_type="Leaf"
/dev_stage="3 week"
/lab_host="DH10B"
/clone_lib="OSIIEb"
/note="Vector: pBluescr:
XhoI; 24 hrs after inno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Oryza (
/mol_type="mRNA"
/cultivar="IR36"
/db_xref="taxon:3
Location/Qualifiers
1. .713
/organism="Bos taur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Butheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:31820259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a cga cgg cca g
ac agc tat gac
B column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHORI - 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ທ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     after innoculation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
  taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        713 k
Bos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gtg
c cat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bp DNA
s taurus g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gtg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (indica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VA linear
genomic clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ୟ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cultivar-group) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ິດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rice 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1: EcoRI; Sit
Blast (PO6-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSS 1
CH240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JUN-2003
)_340H21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     عالی
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
/mol_type="genomic DNA"
/strain="breed: Hereford"
/db_xref="taxon:9913"
/clone="CH240_340H21"
/sex="Male"
/cell_type="Blood"
/cell_type="Blood"
/clone_lib="CHORI-240"
/note="Vector: pTARBAC1.3; Site_1: MboI; Site_2: MboI;
Hereford bull L1 Domino 99375; CHORI-240 Bovine BAC
library (Male) produced by Pieter de Jong"
```

ORIGIN Query Match 34.0%; Best Local Similarity 100.0%; Matches 18; Conservative Score 18; DB; Pred. No. 18; 0; Mismatches , , DB 18; 9 0; Length 713; Indels

<u>.</u>

Gaps

<u>0</u>

Search com Job time : pleted: December 1487 secs ູ ບາ 2004, 07:59:11

멍

Ş

ঠ

밁

Copyright

GenCore (c) 1993

version - 2004

Ltd

Title: Perfect Sequence Minimum Maximum Result No. Word Run OM nucleic Database Post-processing: Total earched equence coring table 9 812e Pred. Negative score sand is number DB DB score: Score seq seq No. is the number o greater than or eques derived by analysis 0f nucleic length: US-09-857-841-3 53 1 gatccatccar Query Match OLIGO\_ Gapop hits 11111987654321 100.0 86.8 86.8 86.8 84.9 84.9 84.9 84.9 84.9 December 4526729 Listing GenEmbl: \* 0 gatccatggacaaatctgaa search, satis NUC 60.0, Length 0 2000000000 seqs, number of results predicted by chance to have a or equal to the score of the result being printed analysis of the total score distribution. first **5** fying using Gapext 2004, 23644849745 45 chose BD261798 AR111976 AR1111975 AR031575 AR031575 AR065687 AR097446 I49964 AR097443 I49961 AR031570 AR065682 AR031574 AR097441 I49959 AR031574 AR065686 AR097445 summarie 30 06:38:07 60. en SUMMARIES mode1 pa 0 rame re ; Search time 1425 Sear Ø 5.1.6 Compugen idue t e 87 gtcgtaaccgtcgacgagct 9053458 BD261798 Enhanceme
AR1111976 Sequence
AR1111981 Sequence
AR1111975 Sequence
AR031575 Sequence
AR097446 Sequence
I49964 Sequence 14
AR031572 Sequence 14
AR031572 Sequence
AR097443 Sequence
I49961 Sequence
I49961 Sequence
I49961 Sequence
I49961 Sequence
AR031570 Sequence
AR031570 Sequence
AR031574 Sequence
AR097441 Sequence
AR097441 Sequence
AR097445 Sequence
AR065686 Sequence
AR065686 Sequence Description Seconds updates/sec ហ

						c 39																			
						45																			
4.	4	4	4.	4	4	84.9	4	4	4.	4.	4.	4.	4.	4	4.	•	4	4.	4	4.			4	4.	4.
69	37	Ü	11	11	0	1066	04	03	00	00	00	00	00	00	00	00	J	J	7	J	~1	9	σ	σ	U)
σ	σ	14	14	14	σ	δ	14			თ	თ	σ	σ	თ	თ	σ	თ	თ	თ	თ	თ		14		თ
82	N	Д	13162	ĬЗ	98		MVCOAT	22	UMCVRN	0027	3019	471	383	02148	9812	133	00027	64	3834	2148	213	ACL	28	N	I49963
A41823 Seguence 4	E01821 cDNA encodi	710	AJ131623 Cucumber	N	98	Se	X77855 Cucumber Mo	U22821 Cucumber mo	Ω	BD000279 Transgeni	AR430190 Sequence	AR364711 Sequence	AR138343 Sequence	AR021487 Sequence	A39812 Sequence 6	ð	78 Transc	ເນ	AR138342 Sequence	86 Se	A32131 CMV capsid	5 Cuc	Ø	59	149963 Sequence 13

RESULT 1
BD261798
LOCUS
DEFINITION

BD261798 53 bp DNA linear PAT 17-JUL-200: in protein production by higher plants using ubiquitin mosaic virus coating protein peptide. 2003

ALIGNMENTS

ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM REFERENCE AUTHORS TITLE

Enhancement in protein or cucumber mosaic viru BD261798
BD261798.1 GI:33071566
JP 2002532098-A/2.
Cucumber mosaic virus (
Cucumber mosaic virus Viruses; ssRNA positive-strand viruses, virus (cucumber mosaic cucumovirus) no DNA stage;

GI:33071566

Cucumovirus.

Bromoviridae

COMMENT

JOURNAL

E 1 (bases 1 to 53)

S Fang,R.X., Wu,J.L. and Chen,X.Y.

Enhancement in protein production by higher plants using ubiquitin or cucumber mosaic virus coating protein peptide

Patent: JP 2002532098-A 2 02-OCT-2002;

INSTITUTE OF MOLECULAR AGROBIOLOGY

OS Cucumber mosaic virus
PN JP 2002532098-A/2
PD 02-OCT-2002
PD 02-OCT-2002
PF 11-DEC-1998 JP 2000588378
PI RONG XIANG FANG, JUNG LIN WU, XIAO YING CHEN
PC C12N15/09, A01H5/00, C07K14/415, C07K19/00, C12N5/10, C12N15/00, PC
C12N5/00 ဌ protein production by higher plants using Sd

G Enhancement in protein product ubiquitin or cucumber mosaic virus coating Location/Qualifiers (6)...(47). protein peptide

(6)..(
Location/Qualifiers

FEATURES

Bourc

organism="Cucumber mo /mol\_type="genomic DNA /db\_xref="taxon:12305" r mosaic virus"

ORIGIN

Query Mat Best Loca Matches <u>a</u>1 similarity 100.0%;
53; Conservative 0 Score 53; pp Pred. No. 2.2 ; Mismatches 2.2e-DB 6; 20; 0 Length 53; Indels Gaps

0

GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT 53

S

```
AR111981
LOCUS
                       DEFINITION
ACCESSION
VERSION
                                              RESULT 4
AR111975
LOCUS
                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
AR1119
LOCUS
       SOURC
                                                                                        뮍
                                                                                                      S
                KEYWORDS
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                   გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                              Ħ
                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 46
                                                                                                                     Query Ma
Best Loc
Matches
                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                    FERENCE AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
ORGANISM
                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                           Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                762
                                                                                                                             Local
                                                                                                                                      Mat
                                                                                                                                                                                            1 (bases 1 to 772)
Boeshore, M.L., McMaste Carney, K.J.
Plants resistant to C
Patent: US 6127601-A 1
                                                                                                                                                                                                                                                                                                                                                                                                                                       Boeshore, M.L., McMaste Carney, K.J.
Plants resistant to C
Patent: US 6127601-A 5
                                                                                                                                      Ch
                       AR111975
Sequence
AR111975
AR111975.
                                                                                                                                                                                                                                                                     AR111981
Sequence 14
AR111981
AR111981.1
Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR111976
Sequence
AR111976
AR111976.
                                                                                                                      46;
                                                                                                                                                                                                                                                                                                                                                                   Similarity
46; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
Unclassified.
                                                                                                      4
                                                                                                                                                                                                                                    Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                     Unknown
                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown
                                                                                                                   1 86.8%;
Similarity 100.0%;
16; Conservative
                                                                                       CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                               CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                   GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to
                                                                                                                                                     1. .772
/organism="unknown"
/mol_type="unassigne
                                                                                                                                                                         US 6127601-A 14 03-OCT-2
Location/Qualifiers
1. .772
                                                                                                                                                                                                                                                                                                                                                                                                                      US 6127601-A 5 03-OCT-20
Location/Qualifiers
1. .771
                                                                                                                                                                                                                                                                                     14
                         \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ហ
                                        Ü
                                                                                                                                                                                                                                                                                                                                                                                                           /mol
                                                                                                                                                                                                                                                                                                                                                                                                                 1. .771
/organism="unknown"
                        GI:
                                        rom
                                                                                                                                                                                                                                                                     GI:12828829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rom
                                                                                                                                                                                                                                                                                     rom
                                                                                                                                                             _type="unassigned
                                                                                                                                                                                                                                                                                                                                                                                                         _type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                   86.8%;
100.0%;
Live (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           771)
                                                                                                                                                                                                                     McMaster, R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  McMaster, R.J.,
                                       patent
                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 patent
                                                                                                                                                                                                                                                                                    patent
                         828823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  828824
                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                    Score 46; DB
Pred. No. 3.6
0; Mismatches
                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                  Score 46; DE Pred. No. 3. 0; Mismatches
                                        SU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SD
                                                                                                                                                                                                                                                                                     US
7
                                        792
61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  771 bp
6127601
                                                                                                                                                                                                                                                                                     ON
                                      27601
                                                                                                                                                                                                                                                                                    ър
27601
                                                                                                                                                                                             of cucumber [-2000;
                                                                                                                                                                                                                     Tricoli, D.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                          of cucumber 2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tricoli, D.M.
                                                                                                                                                              DNA"
                                                                                                                     DB 6; Length 3.6e-16; hes 0; Inde
                                                                                                                                                                                                                                                                                                                                                                  DB 6; Lc
3.6e-16;
                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                     mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                  司
                                                                                                                                                                                                                                                                                                                                                                    Indel
                                                                                                                       Indels
                                                                                                                                                                                                                                                                                            inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                  )Baic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ine
                                                inea
                                                                                                                                                                                                                     Reynolds, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reynolds, J.
                                                                                                                                                                                                                                                                                                                                                                                  771;
                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H
                                                                                                      49
                                                                                                                                                                                                                                                                                                                                     40
                                                                                        46
                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                                                                                    49
                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus
                                                PAT
                                                                                                                                                                                                                                                                                             PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ō
                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ĂT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 53
                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                             4
                                                4
                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                                            -FEB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                -FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -FEB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001
                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                    <u>,</u>
```

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                          FEATURES
source
                                                                                                                                                                     RESULT (AR06568)
                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
AR031575
                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                  ORIGIN
                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Mat
Best Loca
Matches
Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                           JOURNAL
                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                          sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sourc
                                                                                                                                                                                                                                                         Loc
                                                                                                                                                                               70
                                                                                                                                                                                                                                                                 Ma
        tch
                                                                                                                                                                                                                                                         <u>a</u>1
                                                                                                                                                                                                                                                                 Ch
                                                                                                                                                                                                                                                                                                                                                    Unknown.
Unclassified.
1 (bases 1 to
                                          Unclassified.

1 (bases 1 to 130)

1 (bases 1 to 130)

Haseloff, J., Brand, A., Perrimon, N. and Goodman, H.M.

Cell ablation using trans-splicing ribozymes

Patent: US 5849548-A 14 15-DEC-1998;

Location/Qualifiers

1. .130
                                                                                                                                                                                                                                                                                                                                                                                            AR031575
Sequence 1
AR031575
AR031575.1
                                                                                                                                            AR065687
Sequence 14
AR065687
AR065687.1
                                                                                                                                                                                                                                                                                                 Similarity
45; Conservat
                                                                                                                                                                                                                                Ŵ
                                                                                                                                                                                                                                                 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46;
                                                                                                                            Unknown.
                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                               CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                              84.9%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86.8%;
larity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                              14
                                                                                                                                                                                                                                                                                          /organism="unknown"
/mol_type="unassiqn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                              from
                                                                                                                                                              from patent
                                                                                                                                              GI:5995903
                                                                                                                                                                                                                                                                                                                                                                                               GI:5945864
                                         _type="unassigned DNA"
                                                                                                                                                                                                                                                                                          _type="unassigned DNA"
84.9%;
100.0%;
tive (
                                                                                                                                                                                                                                                                                                                                                                                                             patent
                                                                                                                                                                                                                                                <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 o
;
 .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 46; DB
Pred. No. 3.6
0; Mismatches
                                                                                                                                                                                                                                                Score 45; DB 6; L
Pred. No. 1.3e-15;
D; Mismatches 0;
Score 45; DB 6; L
Pred. No. 1.3e-15;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                               130
US 58
                                                                                                                                                             130 bp
US 5849548
                                                                                                                                                                                                                                                                                                                                                                                                                5866384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6; Lo
                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                                                                 Length 130
                Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                       line
                                                                                                                                                                       linear
                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Reynolds, J.F
                                                                                                                                                                                                                                                                                                                                                                                                                       н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    virus
                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                                                                                                                                        PAT
                                                                                                                                                                                                                                                0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>,</u>
                                                                                                                                                                        29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
  Gap
                                                                                                                                                                                                                                                                                                                                                                                                                       9-SEP-
  \omega
                                                                                                                                                                                                                                                                                                                                                                                                                        1999
                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>
  <u>,</u>
```

```
DEFINITION
ACCESSION
VERSION
                LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION VERSION
                                                              RESULT 9
AR031572
                                                                                                                                                                                                                                                                                                                                       RESULT
149964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 7
AR097446
                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                    멎
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                     ঠ
                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                SDOOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Snoo
                                                                                                                                                                                                                                                                                                                                                                                                              Query Ma
Best Loc
Matches
                                                                                                                                        Query Ma
Best Loc
Matches
                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                      Local Similarity hes 45; Conserv
                                                                                                                                                                                                                                                                                                                                                   Œ
                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U)
Unknown.
Unknown.
                         AR031572
Sequence
AR031572
AR031572.
                                                                                                                                                                                                                                                                                                 I49964
Sequence
I49964
I49964.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR097446
Sequence
AR097446
AR097446.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 130)
Haseloff, J., Brand, A., Perrimon, N. and Good
Cell ablation using trans-splicing ribozyme
Patent: US 6071730-A 14 06-JUN-2000;
Location/Qualifiers
1. .130
                                                                                                                                                                                                                                                                                                                                                                                                                h 84.9%;
Similarity 100.0%;
45; Conservative
                                                                                                                                                                                                                        1 (bases 1 to 130)
Haseloff, J., Brand, A., Perrimon, N. and Goodm
Cell ablation using trans-splicing ribozymes
Patent: US 5641673-A 14 24-JUN-1997;
                                                                                                    Ñ
                                                                                                                                                                                                                                                                                                                                                                             Ň
                                                                                                                                                                                                                                                                                                                                                                                               ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ñ
                                                                                                                      ប
                                                                                                                                                                                                                                                            Unclassified
                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                                                                                                                               Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UI
                                                                                                   CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                           CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \dot{\mathbf{L}}
                                             11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                            \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .130
/organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                     /organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                   GI:
                                             from
                                                                                                                                                                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from
                           GI:5945861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:12806176
                                                                                                                                                                                                                                                                                                   24721
                                                                                                                                                                                                                                                                                                                                                                                                                                                              _type="unassigned DNA"
                                                                                                                                                                                    _type="unassigned DNA"
                                                                                                                                       84.9%;
100.0%;
cive (
                                            patent
                                                                                                                                                                                                                                                                                                                     patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             patent
                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                Score 45;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                               Score 45; DB 6; L
Pred. No. 1.3e-15;
); Mismatches 0;
                                             131
US 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              us 1
                                                                                                                                      ore 45; DB 6; Le red. No. 1.3e-15; Mismatches 0;
                                                                                                                                                                                                                                                                                                                     130 bp
US 5641673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130 bp
s 6071730
                                             L bp
5866384
                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                           Goodman, H.M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goodman,
                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                               linear
                                                       inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inear
                                                                                                                                                          130;
                                                                                                                                                                                                                                                                                                                                                                                                                                  130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H
K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96
                                                                                                                                                                                                                                                                                                                              PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                       PAT
                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                       29
                                                                                                                                                                                                                                                                                                                               07-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-FEB-2001
                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                       SEP-1999
                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>
                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
```

```
REFERENCE
AUTHORS
                                                                       TITLE
JOURNAL
FEATURES
                                                                                                 REFERENCE
AUTHORS
                                                                                                                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                              RESULT 11
AR097443
LOCUS
                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
AR06568
LOCUS
                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                      ORIGIN
                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                             Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Mat
Best Loca
  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sourc
                                                                                                                                                                                                                                                                                                                           sourc
                                                                                                                                                                                                                                                                       Loca
                    Mat
                                       Unknown.

M Unknown.

Unclassified.

1 (bases 1 to 131)

Haseloff, J., Brand, A., Perrimon, N. and Goodman, H.M.

Cell ablation using trans-splicing ribozymes

L Patent: US 6071730-A 11 06-JUN-2000;

Location/Qualifiers

131
            <u>1</u>
                                                                                                                                                                                                                                                                       al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   al
                    Ch
                                                                                                                                                                                                                           ហ
                                                                                                                                                                                                                                                                                                           Unknown.
Unclassified.
1 (bases 1 to 131)
Haseloff, J., Brand, A., Perrimon, N. and Goodman, H.M.
Cell ablation using trans-splicing ribozymes
Patent: US 5849548-A 11 15-DEC-1998;
Location/Qualifiers
                                                                                                                                                    AR097443
Sequence 11
AR097443
AR097443.1
                                                                                                                                                                                                                                                                                                                                                                                                                        AR065684
Sequence
AR065684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 131)
Haseloff, J., Brand, A., Perrimon, N. (Cell ablation using trans-splicing Patent: US 5866384-A 11 02-FEB-1999
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                 AR065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45;
  Similarity
45; Conserva
                                                                                                                                                                                                                           ù
                                                                                                                                                                                                                                            Ú
                                                                                                                                                                                                                                                             Similarity
45; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Û
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ប្រា
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                          CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                  684.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservat
                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                                                                                    11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="unknown"
/mol_type="unassign
                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                  from
                                                                                                                                                       GI:12806173
                                                                                                                                                                                                                                                                                                                                                                                                                 GI:5995900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13:
   CT
84.91
100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84.9%;
100.0%;
tive (
                                                                                                                                                                                                                                                            84.9
100.
                                                                                                                                                                                                                                                                                                         _type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _type="unassigned DNA"
                    98;
                                                                                                                                                                                                                                                                                                                                                                                                                                 patent
                                                                                                                                                                      patent
            0%;
                                                                                                                                                                                                                                                                     98;
Score 45; ин Pred. No. 1. 0; Mismatches
   0
                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 45; DB Pred. No. 1.3 0; Mismatches
                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                           Pred. No. 1.3e-15;
Mismatches 0; Inde
                                                                                                                                                                      131 bp
US 6071730
                                                                                                                                                                                                                                                                                                                                                                                                                                   131 bp
US 5849548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 6; 1.3e-15;
            DB
1.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and Good
   Œ
            . зе
                    g
   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goodman, H
                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
   · ·
                                                                                                                                                                                linea
                                                                                                                                                                                                                                                                                                                                                                                                                                            line
                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indel
                    131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           131;
                                                                                                                                                                                                                                                                               131
                                                                                                                                                                                                                           97
                                                                                                                                                                                                                                             49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49
   ÇΩ
                                                                                                                                                                                н
                                                                                                                                                                                                                                                                                                                                                                                                                                            H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
Z
                                                                                                                                                                                PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT
                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                             Gaps
  Gaps
                                                                                                                                                                                4-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                            9-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gap
                                                                                                                                                                                                                                                                                                                                                                                                                                            SEP-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \omega
   ?
                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

U

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
                     DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                            RESULT 14
AR065682
                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
I49961
LOCUS
                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                              RESULT 13
AR031570
                                                                                                                                                          ဝ္က
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                      rocus
                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                     Locus
      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OURCE
                                                                                                                                                                                                                                                                                                                                                                                                                         EATURES
                                                                                                                         Query
Best I
Matche
                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                EFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                           ches
                                                                                                                                                                                  sourc
                                                                                                                                                                                                                                                                                                                                                                                                                  sourc
                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12
                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                           Match
                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             53
                                                                                             74
                                                                                                                                                                                                                                                                                                                             ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I49961
Sequence
I49961
I49961.1
                             AR065682
Sequence
AR065682
AR065682.
                                                                                                                                                                                                                                       Unknown.
Unknown:
                                                                                                                                                                                                                                                             AR031570
Sequence
AR031570
AR031570.
                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 131)
Haseloff, J., Brand, A., Perrimon, N. and Cell ablation using trans-splicing repatent: US 5641673-A 11 24-JUN-1997;
Location/Qualifiers
1. .131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
Unclassi
       Unknown.
                                                                                                                                                                               1 (bases 1 to 152)
Haseloff, J., Brand, A., Perrimon, N.
Cell ablation using trans-splicing
Patent: US 5866384-A 9 02-FEB-1999;
Location/Qualifiers
1. .152
                                                                                                                          Similarity 100.0% 45; Conservative
                                                                                                                                                                                                                                                                                                                                                          Similarity 100.0%;
45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                           ហ
                                                                                                                                                                                                                                                                                                                             w
                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                Unclassified
Unclassified
                                                                                                                                                                                                                                                                                                                           CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                           fied.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11
                                              9
                                                                                                                                                                                                                                                                               φ

    152
    organism="unknown"
    mol_type="unassign"

                                                                                                                                                                                                                                                                                                                                                                                                 /organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:2472181
                                              from
                                                                                                                                                                                                                                                                               Ħ
                              GI:
                                                                                                                                                                                                                                                               <u>ព</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                               rom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rom
                                                                                                                                                                                                                                                                                                                                                                                                 type="unassigned
                                                                                                                                                                 type="unassigned
                                             patent
                                                                                                                                                                                                                                                                             patent
                               99589
                                                                                                                                                                                                                                                                94585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              patent
                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                9
                                                                                                                          Score 45;
Pred. No.
0; Mismato
                                                                                                                                                                                                                                                                                                                                                          Score 45; DB 6; L
Pred. No. 1.3e-15;
); Mismatches 0;
                                                                                                                                                                                                                                                                               SU
                                              Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               us
Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               131 bp
3 5641673
                                             152 bp
5849548
                                                                                                                                                                                                                                                                               ហហ
                                                                                                                          45; DB 6;
l. No. 1.3e-1;
smatches (
                                                                                                                                                                                                                                                                               \infty N
                                                                                                                                                                                                                                                                               663
dd
                                                                                                                                                                  DNA"
                                                                                                                                                                                                                                                                                                                                                                                                  DNA"
                                                                                                                                                                                                                                                                               œ
                                                                                                                                                                                                                                                                                                                                                                                                                                        and Goodma
                                                                                                                                                                                                         and Goodma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                 Goodman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goodman
                                                                                                                           ဝ က
                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                         Length
                                                                                                                           Indel
                                                                                                                                                                                                                                                                                                                                                            Indels
                                                     linear
                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inear
                                                                                                                                          152;
                                                                                                                                                                                                                 H.M
                                                                                                                                                                                                                                                                                                                                                                           131
                                                                                                            49
                                                                                                                                                                                                                                                                                                                                            49
                                                                                                                                                                                                                                                                                                                             97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
                                                                                             118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97
                                                                                                                           Ø
                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                      PAT
                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                           0
                                                                                                                                                                                                                                                                                       29-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-OCT-19
                                                      29
                                                                                                                           Gap
                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                      SEP-1999
                                                       HP-
                                                                                                                           Ø
                                                       1999
                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                           0
```

.

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                               LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
SOURCE
                                                                                                                                                                                                                                                                                                       RESULT 19
AR097441
Sear
                                         日
                                                                                                                                                                                                                                                                                                                                                  日
                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                          Query Mat
Best Loca
Matches
                                                                                 Query Mat
Best Loca
Matches
                                                                                                                                                          source
 ime
          O
                                                                                            a1
pleted:
1425 se
                                          74
                                                                                                                                                                                                                                                              AR097441
Sequence 9
AR097441
AR097441.1
                                                                                                                                                                                                                                 Unknown.
Unknown.
                                                                                                                                                               1 (bases 1 to 152)
Haseloff,J., Brand,A., Perrimon,N. and Goodma
Cell ablation using trans-splicing ribozymes
Patent: US 6071730-A 9 06-JUN-2000;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                    84.9%;
Similarity 100.0%;
45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 152)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,H.M.
Cell ablation using trans-splicing ribozymes
Patent: US 5849548-A 9 15-DEC-1998;
Location/Qualifiers
j. .152
                                                             ហ
                                                                                                                                                                                                                       Unclassified.
                                                                                                                                                                                                                                                                                                                                                                      ប្រា
                                                                                1 84.9%; Score 45; DB 6; Le Similarity 100.0%; Pred. No. 1.3e-15; 15; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                  весв
          December
                                                                                                                                   /mol_type="unassigned DNA"
                                                                                                                                               /organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                   from patent
                                                                                                                                                           .152
                                                                                                                                                                                                                                                                 GI:12806171
         ហ
•
          2004,
                                                                                                                                                                                                                                                                                                                                                                                          Score 45; DB; Pred. No. 1.3
                                                                                                                                                                                                                                                                                    Sn
            07:
                                                                                                                                                                                                                                                                                    6071730.
          34:17
                                                                                                                                                                                                                                                                                                                                                                                         DB 6; LC
1.3e-15;
0;
                                                                                                                                                                                                   and Goodman, H.M.
                                                                                                                                                                                                                                                                                                DNA
                                                                                                      Length 152;
                                                                                                                                                                                                                                                                                                                                                                                                               Length 152;
                                                                                    Indels
                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                               PAT
                                                                                                                                                                                                                                                                                                                                                                                           ..
..
                                                                                   .
0
                                                                                                                                                                                                                                                                                                14-FEB-2001
                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                             0
```

۳.

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Word
                                                                                                                                                                      Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum
                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coring
                                                G
                           O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tal
                                                                                                                                                                      Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       arche
                                                                                                                                                         NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nuclei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -processing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               size
      10045654C
                                                                                                                                                                                                                   Pred. Negative score sand is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        numbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
BC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ab1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                          Ŝ
                                                                                                                                                           Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  geq
pea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               •
                                                                                                                                                           O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĸ
                                                                                                                                                                                                                   No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O
     1188446
11884
11884
11884
11884
11884
11884
                                                                                                                                                           re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length:
length:
                                                                                                                                                                                                                                                                 22:

3:

43:

55:

10:

113:

114:

115:

117:

118:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

119:

                                                                                                                                                                                                                   is the
ater tha
rived by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OLIGO
Gapop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        þį
                                                                                                                                                         Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      December
    Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      σ
                                                                                                                                                                                                                                                            Published Applications NA:*

/cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*

/cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*

/cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*

/cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

/cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               atccatggaca
      100000781888
                                                                                                                                                                                                                               han or eç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            search,
                                                                                                                                                         Leng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ,
NGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85
                 φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     200000000
   771
772
792
772
960
1674
1020
1116
1996
1996
3878
3878
                                                                                                                                                                                                                    n or equal
analysis c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
                                                                                                                                                          th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>ဂ</u>္ဂ ရု
                \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2004,
                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            using
                                                                                                                                                                                                                                          0
f
      ₩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               latctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1Core
1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                 ហ
                                                                                                                                                                                                                   results l to the of the t
                                                                                                                                                           ID
     US-10
US-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              summari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07:06:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \boldsymbol{\sigma}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ģ
                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
 10-011-033-5

10-011-033-14

10-011-033-3

10-011-033-1

10-011-033-9

10-369-493-35

10-425-115-38

10-425-115-38

10-424-599-94

10-101-464A-9

10-101-464A-9

10-136-761-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       рa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ത
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                   s predicted by e score of the total score of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ion
04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ramet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (wi
127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search
ithout a
77.303 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35
                                      Ø
      583
882
291
291
496
950
1
      1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cgta
                                                                                                                                                                                                                   by chance t
the result k
e distributi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              h time
align
Mill:
                                       Ø
                                                             or w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               leegte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gnmen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ው
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     228
                                                                                                                                                         Descri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gacgagc
 Sequence
                                                                                                                                                                                                                    to have
being pr
tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             updates/sec
                                                                                                                                                         jď
                                                                                                                                                          ion
                                                                                                                                                                                                                               print
5, Appli
14, Appli
3, Appli
1, Appli
9, Appli
35833, A
38826, A
6291, Ap
94969, A
950, Appli
e 1, Appli
97141, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ហ
                                                                                                                                                                                                                                ed
                                                                                                                                                                                                                                                                                                                                                            RESULT 1
US-10-011-0
; Sequence
; Publicati
; GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \alpha \alpha \alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          വവ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                       QZ
                                                                                                                                                                                                                                                                                           Н
        H
                           Þ
                                                               P
                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                     \triangleright
                                                                                                                                                                                                                                                                                            ITLE
                                                                                                                                                                                                                                                                                            ဝ္ဂ
```

$\omega$		
NNHHO	440044468	762 762 762 762 762 762 762 707 713 744 824 2621 11476
	日ファフロキュローニ	113 113 113 113 113 113 113 113 113 113
10-029-386-12 10-060-036-39 10-767-701-13 10-027-632-18 10-027-632-18	-09-864-761-1736 S-10-425-115-101 S-10-437-963-250 S-10-437-963-741 S-10-767-795-560 S-10-425-115-900 S-10-060-036-347 S-10-060-036-410 S-10-424-599-298 S-09-876-143-658	US-10-027-632-353 US-10-027-632-353 US-10-027-632-353 US-10-027-632-353 US-10-027-632-353 US-10-027-632-353 US-10-767-701-226 US-10-027-632-211 US-10-027-632-211 US-10-027-632-211 US-10-027-632-208
Sequence 1276, Ap Sequence 3938, Ap Sequence 1327, Ap Sequence 18852, A Sequence 18852, A	quence 17367, equence 10145 equence 25065 equence 74167 equence 560, equence 90059 equence 3474, equence 4108, equence 658,	Sequence 3534, Sequence 3535, Sequence 3536, Sequence 3536, Sequence 3536, Sequence 3536, Sequence 22640, Sequence 20126, Sequence 21126, Sequence 20862, Sequence 5419, Sequence 5419, Sequence 3, App Sequence 3, App Sequence 3, App

## ALIGNMENTS

es de la composition de la composition

```
APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
                                                                                                                                                      NUMBER OF SEQUENCES: 15

CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow & Katz
STREET: 2 Prudential Plaza, 180 N.
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, V
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                033-5
5, Application US/10011033
ion No. US20020124286A1
L INFORMATION:
PPLICANT: Boeshore, Maury L
                                                                                                                                                                                                                                                                                                                                                                                                                           Reynolds, John Carney, Kim J INVENTION: Plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                McMaster, J. Russ
Tricoli, David M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                           Plants Resistant Cucumber Mosaic \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Russell
                                                                                                                                                                                                                                                                                                                                       & Katz,
                                                                                                                                                                                                                                                                                                                                                                                                            t to C
Virus
                                                                                                                                                                               Version
                                                                                                                                                                                                                                                                                                                                        Stetson,
                                                                                                                                                                                                                                                                                                                                                        Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                Strains
                                                                                                                                                                                #
#
.
                                                                                                                                                                                30
                                                                                                                                                                                                                                                                                                                                          Suite
                                                                                                                                                                                                                                                                                                                                                                                                                               of.
                                                                                                                                                                                                                                                                                                                                          4700
```

<u>,,</u>

```
RESULT 2
US-10-011-033-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 46
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 14, Application US/10011033
Publication No. US20020124286A1
GENERAL INFORMATION:
APPLICANT: Boeshore, Maury L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE
TELEFAX:
INFORMATION FOR SEQUENCE CHARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-011
INFORMATION FOR SEQUENCE
                                                                          COUNTRY: U.S.A.

ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

COMPUTER: Patentin Release #1.0, Veries

SOFTWARE: Patentin Release #1.0, Veries

CURRENT APPLICATION NUMBER: US/10/011,033

FILING DATE: 13-No. US20020124286A:

CLASSIFICATION : <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/875,233

FILING DATE: 26-JUN-1997

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 771 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: Cucumber mosai
                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUEN CORRESPONDENCE ADDRESSEE:
                                       NAME: Lisa V. Mueller TELECOMMUNICATION INFORMATION: TELEPHONE: 312-616-5400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
-033-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 100.0%;
46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: 3..660
OTHER INFORMATION: /codon_start= 3
/function= "ENCAPSIDATES VIRUS RNA"
/product= "COAT PROTEIN"
/gene= "CP"
/number= 1
             TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 2 Prudent
CITY: Chicago
STATE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                Q
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard_name=
CE DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JEPHONE: 312-616-54
JEFAX: 312-616-5460
FOR SEQ ID NO: 5:
CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                            Carney, K
                                                                                                                                                                                                                                               -AY: U.S.A.
60089
   CHARACTERI
                                                                                                                                                                                                                                                                                                                                    SEQUENCES: 15
DENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                       McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
              SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                           Boeshore, Maury L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              V-34
              312-616-5460
Q ID NO: 14:
                                                                                                                                                                                                                                                                                                            Rockey, Milnamow
Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                              Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "COAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -5400
460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 46; DB 13;
Pred. No. 1.7e-16;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROTEIN"
                                                                                                                                                                                                                                                                                                              & Katz,
180 N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            បា
                                                                                                                                                                                                                                                                                                                                                                Virus
                                                                                                                                                  )6A1-
                                                                                                                                                                                       Version
                                                                                                                                                                                                                                                                                                              , Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                                                                                              Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                              Suite
                                                                                                                                                                                                                                                                                                                                                                              Of
f
                                                                                                                                                                                          Ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49
                                                                                                                                                                                                                                                                                                              4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RESULT 3
US-10-011-0
; Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S-10-011-033-3
Sequence 3, Application US/10011033
Publication No. US20020124286A1
GENERAL INFORMATION:
APPLICANT: Boeshore, Maury L
                                                                                                                                            INFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 772 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL CO-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Loca
                              CUCUMDER OF SEQUENCES: 15

CORRESPONDENCE ADDRESS:
ADDRESSE: Rockey, Milnamow & Katz, Ltd.
STREET: 2 Prudential Plaza, 180 N. Stetson,
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COUNTRY: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1
CURRENT APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2001
CLASSIFICATION NUMBER: US/08/875,233
FILING DATE: 13-No. US20020124286A1-2001
CLASSIFICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELEPHONE: 312-616-5460
TELEPHONE: 312-616-5400
TELEPAX: 312-616-5460
ORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 792 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY: CDS
LOCATION: 3..660
TEOMIENCE DESCRIPTION: SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ω¥
             오본프롤
                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                        Н
                                                                                                                                                                                                                                                             ፵
                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RIGINAL SOURCE:
ORGANISM: Cucumber Mosaic
INDIVIDUAL ISOLATE: A35
           NTI-SENSE: NO RIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 86.8%;
Similarity 100.0%;
46; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
E OF INVENTION: Plants Resistant t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CUCUMBER MOSAIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 46; DB 13; 1
Pred. No. 1.7e-16;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Virus
VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          t to C
Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 772;
                                                                                                                                                                                                                                                                                                                                   #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                    30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

```
RESULT
US-10-(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                              ;
US-10-011-033-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/10011033
Sequence 1, Application US/10011033
Publication No. US20020124286A1
GENERAL INFORMATION:
 Query Match
Best Local
                                                                                                                                                                   TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 772 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SI
-011-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/011,03
FILING DATE: 13-No. US2002012428
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,23
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
                                                                             MOLECULE | NO HYPOTHETICAL: NO ANTI-SENSE: NO ORIGINAL SOURCE: ORGANISM: Cucumber M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: CDS
LOCATION: 3..660
SEQUENCE DESCRIPTION: 600.003-3
                                                                                                                                                                                                                                                                                                                                                                ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey,
STREET: 2 Prudenti
                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                  NAME: Lisa V. Mueller TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 100.0%; t6; Conservative
 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 2
CITY: Chi
STATE: Il
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                           NAME/KEY: CDS
LOCATION: 3..660
NCE DESCRIPTION: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carney, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                Illiñois
                                                                                                                                                                                                                                                                                                                                                                                                                                 U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : Rockey, M: Prudential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
81.1%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plants Resistant
Cucumber Mosaic '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ
                                            SEQ
                                                                                         Mosaic : V-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 4
                                                                                                                                                                                                                                                                                                                                US/10/011,033
US20020124286A1-2001
           S
 Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  D
                                             ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         red. No. 1.7
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO:
                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46;
                                                                                                  Virus
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     & Katz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
••
                                            :
                                                                                                                                                                                                                                                                                                                                                                  ,
 DB 13;
8.9e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      )B 13; _
L.7e-16;
0;
                                                                                                                                                                                                                                                                                                                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                   #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>.</u>
```

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                            US-10-011-
                                                                                           Query Match
Best Local S
Matches 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 9, Application US/10011033 Publication No. US20020124286A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
ORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 960 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                 HYPOTHETICAL: NAMTI-SENSE: NO ORIGINAL SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0,

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                       NAME/KEY: CDS
LOCATION: 1..658
SEQUENCE DESCRIPTION: 8
-033-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES PONDENCES
                                                                                                                                                                                                                  ທ
                                                                                                                                                                                                                                                                                              7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \Omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \mathcal{Q}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              033-9
                                                                                                                                                                                                                                                                                         EATURE:
                                                                                                                                                                                                                                                                                                                                         RIGINAL SOURCE:
ORGANISM: C
                                                                                                                                                                                                                                                                                                                                                                                                                   POTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 2 Prudential Plaza, 1 CITY: Chicago STATE: Illinois COUNTRY: U.S.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43;
                                                                                               37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                σ
                                                                                           69.8%;
Similarity 100.0%;
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carney, K: INVENTION: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRY: U.S.A. 60089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tricularian Journal Reynolds, Journal Reynolds, Journal Reynolds and Jou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               McMaster, J. Russell Tricoli, David M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TE ADDRESS:
                                                                                                                                                                                                                                                                                                                    STRAIN
                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                  CUCUMBER MOSAIC
                                                                                                                                                                                                                                             658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         John F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maury L
                                                                                                                                                                                                                  SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Milnamow
                                                                                               <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
                                                                                           Score 37; DB Pred. No. 2.6 0; Mismatches
                                                                                                                                                                                                                   IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                     NO:
                                                                                                                                                                                                                                                                                                                                            VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
180
                                                                                                                                                                                                                     9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Katz, Lta.
30 N. Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 t to C
                                                                                                                   DB
2.6
                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #1.
                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of
f
                                                                                                                                               960;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4700
                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                               0
```

RESULT 6 US-10-369-

493-35833/c

```
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Aci
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21 (53222) B
CURRENT APPLICATION NUMBER: US/1
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 38826
LENGTH: 1020
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
US-10-4
                                                      RESULT 8
US-10-156-761-6291/c
; Sequence 6291, Application US/10156761
; Publication No. US20030119018A1
; GENERAL INFORMATION:
                                                                                                                                          8
                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 엉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Goldman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL
TITLE OF INVENTION: PLANTS WITH IMPROVED PI
FILE REFERENCE: 38-10(52052)B
CURRENT APPLICATION NUMBER: US/10/369,493
CURRENT FILING DATE: 2003-02-28
PRIOR APPLICATION NUMBER: US 60/360,039
PRIOR FILING DATE: 2002-02-21
NUMBER OF SEQ ID NOS: 47374
SEQ ID NO 35833
LENGTH: 1674
                                                                                                                                                                                     Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 38826, Appl Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Publication No. US20 GENERAL INFORMATION:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     -10-425-115-38826
Sequence 38826, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Mesorhizobium loti
0-369-493-35833
                                                                                                                                                                                                                                                                  ORGANISM: Zea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                Local
                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match
                                                                                                                                          983
                                                                                                                                                                                                                                  INFORMATION:
115-38826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35833
                                                                                                                                                               17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                      18
S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :n 37.7%;
Similarity 100.0%;
20; Conservative
 OMURA, SATOSHI
IKEDA, HARUO
ISHIKAWA, JUN
HORIKAWA, HIROSHI
SHIBA, TADAYOSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cao,
                                                                                                                                        TGAATCAACCAGTGCTGG
                                                                                                                                                                               34.0%;
imilarity 100.0%;
; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCTGGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCTGGTCGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US2004021427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10369493
US20030233675A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yongwei
                                                                                                                                                                                                                                              Clone
                                                                                                                                                                                                                                              ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                             US/10425115
72A1
                                                                                                                                                                                                                                                                                                                                        US/10/425,115
                                                                                                                                                                                                                                                                                                                                                                         Acid
                                                                                                                                          1000
                                                                                                                                                                                                                                             MRT4577_135411C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            °,
                                                                                                                                                                S
4
                                                                                                                                                                                       0
                                                                                                                                                                                                Score Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred.
                                                                                                                                                                                                                                                                                                                                                                          Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MICROBIAL IMPROVED P
                                                                                                                                                                                       Mismat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismat
                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20;
                                                                                                                                                                             No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              che
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 B
                                                                                                                                                                                                            Ba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L PROTEINS PROPERTIES
                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       )B 15
                                                                                                                                                                                       \mathbf{\omega}
                                                                                                                                                                                                Ü
                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ហ
                                                                                                                                                                                                                                                                                                                                                                          Other
                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                          Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLANTS
                                                                                                                                                                                                            1020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1674;
                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FOR
                                                                                                                                                                                                                                                                                                                                                                         Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRODUCTION
                                                                                                                                                                                                                                                                                                                                                                           With
                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OF.
```

```
RESULT 9
US-10-424-5
; Sequence
                                                                                                          RESULT 10
US-10-101-4
; Sequence
; Publicati
                                                                                                                                                                                                                                                                                                       ; OTHER 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-156-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 151
SEQ ID NO 6291
LENGTH: 1116
TYPE: DNA
ORGANISM: Streptomyces a
                                                                                                                                                                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Ma
Best Loc
Matches
GENERAL INFORMATION:
APPLICANT: Strabala, Timothy
APPLICANT: Nieuwenhuizen, Nicolaas
APPLICANT: Higgins, Colleen M.
TITLE OF INVENTION: Compositions Isolated
TITLE OF INVENTION: and Their Use in the
FILE REFERENCE: 11000.1020c2
CURRENT APPLICATION NUMBER: US/10/101,464A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Publicati
GENERAL I
                                                                                                                                                                                                                                                                                                                                                                                         SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
TITLE OF INTITLE OF INTITLE OF INTITLE OF INTITLE OF INTITLE OF INTITLE REFEREIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANIE:
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(1116)
                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
TITLE OF IN
FILE REFERE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT
CURRENT
PRIOR AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT
                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Glycine max
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                           LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LICANT: SAKAKI, YOSHIYUKI
LICANT: HATTORI, MASAHIRA
LE OF INVENTION: NOVEL POLYNUCLEOTIDES
E REFERENCE: 249-262
RENT APPLICATION NUMBER: US/10/156,761
RENT FILING DATE: 2002-05-29
OR APPLICATION NUMBER: JP 2001-204089
OR FILING DATE: 2001-05-30
OR APPLICATION NUMBER: JP 2001-272697
OR APPLICATION NUMBER: JP 2001-272697
OR FILING DATE: 2001-08-02
BER OF SEQ ID NOS: 15109
ID NO 6291
NGTH: 1116
                                                                                                                                                                                                                                                                 Loc
                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mat
                                                                                                                                                                                                                                                                                                                                                                                     CANT: Zhou Yihua
CANT: Cao Yongwei
OF INVENTION: Soy Nucleic Ac
OF INVENTION: Plants and Us
REFERENCE: 38-21 (53223) B
NT APPLICATION NUMBER: US/10/
NT FILING DATE: 2003-04-28
R OF SEQ ID NOS: 285684
NO 94969
                                                                                            464A-950/c
950, Application US/10101464A
ion No. US20030046728A1
INFORMATION:
                                                                                                                                                                                              532
                                                                                                                                                                                                                                                                                                      599-94969
                                                                                                                                                                                                                                                                                                                      INFORMATION: Clone ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94969, Application US/10424599 ion No. US20040031072A1 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        185 recreerceraaccerce 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>a</u>1
                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99-94969
                                                                                                                                                                                                                                                Similarity 100.0%;
18; Conservative
                                                                                                                                                                                                                                                                                                                                                                             1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34.0%;
Similarity 100.0%;
18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 La Rosa Thomas J
Kovalic David K
Zhou Yihua
                                                                                                                                                                                                                         GGTCGTAACCGTCGACGA 50
                                                                                                                                                                                             GGTCGTAACCGTCGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCTGGTCGTAACCGTCG 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           avermitilis
                                                                                                                                                                                                                                                                                                                                                                                                                                 US/10/424,599
  US/10/101,464A
                                                                                                                                                                                                                                                                                                                    PAT_MRT3847
                                                                                                                                                                                                                                                0;
                                                                                                                                                                                              549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
~:
                                                                                                                                                                                                                                                               Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acid Molecules and Other Molecules
Uses Thereof for Plant Improvement
                                                                                                                                                                                                                                               ore 18; DB 16 red. No. 2.3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1
2.3;
                           from Plant Ce
Modification
                                                                                                                                                                                                                                                                                                                       56769C.1
                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                   <u>o</u>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                             Length 1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1116
                              Cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                              Plant
                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                              Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Associated With
                              Signaling
                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>,</u>
```

٠.

```
ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                        망
                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
US-10-156-761-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                         US-10-437-963-97141
                                                                    RESULT
                                                                                                                                                                                                                                                                                                                 APPLICANT: OMURA, SATOSHI
APPLICANT: IKEDA, HARUO
APPLICANT: ISHIKAWA, JUN
APPLICANT: HORIKAWA, HIROSHI
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Publication
          Sequence 97141, Application Publication No. US2004012334 GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas
                                                                                                                                                    Mat
                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PCT/US00/00724
PRIOR FILING DATE: 2000-01-11
NUMBER OF SEQ ID NOS: 989
SOFTWARE: FastSEQ for Windows Version 4.
SEQ ID NO 950
LENGTH: 3878
                                                                                                                                                                                                                                                                                                         NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT
                                                                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                   OTHER :
                                                                                                                                                                                                                                   ORGANISM: Streptomyces FEATURE: nisc feature
                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Eucalyptus
0-101-464A-950
                                                                                                                                                                                                                                                                        TYPE: DNA
                                                                                                                                                    ches
                                                                                                        7582185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R APPLICATION NUMBER: 09/70
R FILING DATE: 2000-11-01
R APPLICATION NUMBER: 09/22
R FILING DATE: 1999-01-12
R APPLICATION NUMBER: 60/10
R FILING DATE: 1999-11-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2685
                                                                                                                                                                                                   INFORMATION: 761-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING
                                                                                                                              29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              th 34.0%; Similarity 100.0%; 18; Conservative
                                                                                                                                                                                                                                                                                   9025608
                                                                                                                                                    Similarity 100.0%; 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                         SEQ
                                                                                                                                                                                                                        misc_feature (4187715)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No
                                                                                                       TGCTGGTCGTAACCGTCG
||||||||||||||||
TGCTGGTCGTAACCGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGACAAATCTGAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/10156761 No. US20030119018A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGACAAATCTGAATCA
 Kovalic,
                                                                                                                                                                                                                                                                                                           IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DATE:
                                                                                                                                                                                                                                                                                                           NOS:
Thomas
, David
                                                                                                                                                                                                             a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       grandis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002-03-18
                                                                                                                                                                                                                                                                                                           15109
                                                                                                                                                                                                             ÇŤ
                                                                                                                                                                            34.0%;
                                                                                                                                                                                                                                                            avermitil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/162,866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09/704,
                                                                                                                                                                                                             'n
                                  US/10437963
43A1
 ᄶᄓ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /228,
                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                       7582202
                                                                                                                              46
                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score :
                                                                                                                                                                 Score 1
                                                                                                                                                                                                               other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                  Mismatches
                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.0
                                                                                                                                                                                                               9
                                                                                                                                                                                                               unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2:
                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .2;
                                                                                                                                                                            15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3878;
                                                                                                                                                                            9025608;
                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                      <u>,</u>
```

```
US-1
                                                                                                                                                                  US-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Wang, David G.
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification ar
TITLE OF INVENTION: Polymorphisms ir
FILE REFERENCE: 108827.129
CURRENT APPLICATION NUMBER: US/10/027
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,
PRIOR FILING DATE: 2000-07-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Publicati
                                                                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SULT 13
S-10-027-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ.
                                                                                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                               SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILE REF
CURRENT
CURRENT
NUMBER O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
TITLE
FILE R
                                                                                                                                                                                                                                                                                           NUMBER
                                                                                                                                                                                                                                                                                                             PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                   PRIOR PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR PRIOR PRIOR PRIOR
                                                                                                                                                                                   LENGTH: 762
TYPE: DNA
ORGANISM: Human
                                                                                                                                                                   10-027-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEATURE:
NAME/KEY: unsure
LOCATION: (1)..(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ID NO
                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ICANT: Zhou, Yihua
ICANT: Cao, Yongwei
ICANT: Wu, Wei
ICANT: Boukharov, Andrey A.
ICANT: Barbazuk, Brad
ICANT: Li, Ping
ICANT:
                                                                                                                                                                                                                                                                                                                                                R APPLICATION NUMBER: US 60 R FILING DATE: 2000-07-12 R APPLICATION NUMBER: US 60 R FILING DATE: 2000-04-20 R FILING DATE: 2000-03-29 R APPLICATION NUMBER: US 60 R FILING DATE: 1999-09-28 R FILING DATE: 1999-09-28
                                                                                                                       Match
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: U. FILING DATE: 1999-08-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OF SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          632-3534
3534, Application US/10027632
ion No. US20020198371A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION: 963-97141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SM: Oryza
                                                                                                                                                                   632-3534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/1 FILING DATE: 2003-05-14 OF SEQ ID NOS: 204966
                                         12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in 32.1%;
Similarity 100.0%;
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           285
                                                                                                                                                                                                                                                  3534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97141
                                                                                                   Similarity
                                                                                                                                                                                                                                                                        FastSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATCCATGGACAAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATCCATGGACAAATCT
AAATCTGAATCAACCAG
                                         AAATCTGAATCAACCAG
                                                                                                                                                                                                                                                                        ID NOS: 325720
SEQ for Windows
                                                                                 32.1%;
larity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (285)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unsure
                                                                                                                                                                                                                                                                                                                                    Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/10/437,963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/10/027,632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/198,676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/218,006
                                                                                                                                                                                                                                                                                                                                    60/146,002
                                                                                                                                                                                                                                                                                                                                                                           60/156,358
                                                                                                                                                                                                                                                                                                                                                                                                                     60/167,363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/193,483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271
                                          28
                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/185,218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   all
                                                                               Score 17; DB 13
Pred. No. 8.9;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT_MRT4530_95173C.1
                                                                              0;
                                                                                                                                                                                                                                                                         Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 17;
Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n locations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and Mapping of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Molecules and Other Thereof for Plant Imp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1 9.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17;
                                                                                                                           13;
                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            285;
                                                                                                                             762;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Molecules
                                                                                 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wit
```

Sn

밁

474

490

5

Ş

```
RESULT 14
US-10-027-632-3535
; Sequence 3535, Application US/10027632
; Sequence 3535, Application US/10027632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
US-10-027-632-3536
; Sequence 3536, Application US/10027632
; Publication No. US20020198371A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ 1L
LENGTH: 762
TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mappi
TITLE OF INVENTION: Polymorphisms in the Hu
FILE REFERENCE: 108827.129
CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-04-20
PRIOR FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR FILING DATE: 2000-03-29
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-08-09
NUMBER OF SEQ ID NOS: 325720
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-08-09
NUMBER OF SEQ ID NOS: 325720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3535, Application US/10027632
Publication No. US20020198371A1
GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of TITLE OF INVENTION: Polymorphisms in the Human FILE REFERENCE: 108827.129
FILE REFERENCE: 108827.129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RIOR APPLICATION NUMBER: US 60 RIOR FILING DATE: 1999-08-09 UMBER OF SEQ ID NOS: 325720 OFTWARE: FastSEQ for Windows VQ ID NO 3535 LENGTH: 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32.1%;
Similarity 100.0%;
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAATCTGAATCAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 17;
Pred. No
0; Mismat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and Mapping of in the Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of Single
n Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of Single
Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            762;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
TYPE: DNA
ORGANISM: Human
-10-027-632-3536
```

Query Match Best Local S Matches 17 h 32.1%; Score 17; DB 13; Similarity 100.0%; Pred. No. 8.9; 17; Conservative 0; Mismatches **°** Length 762; Indels <u>,</u> Gaps

0;

밁

Search co Job time pleted: December 235 secs ហ • 2004, 08:04:09

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect s
Sequence:
                                                                                                                                                                                                                                                  Result
No.
                                                                                                                                                                                                                                                                                                                                                                                  Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run
                                                                                                                                                                                                                                                                                                                                                                                                                    Post-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9n:
    ched
                                                                                                                                                                                                                                                  • 4
                                                                                                                                                                                                                                                                                                                                                                                                                   processing:
                                                                                                                                                                                                                                                                                            Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                               dmun
                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                                                                                                  Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8COT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         table
                                                                                                                                                                                                                                                  S
   core
                                                                                                                                                                                                                                                                                             18
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ď
                                                                                                                                                                                                                                                                                                                                                                                                                                   seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               •
                                                                                                                                                                                                                                                                                                                                                                                                                                                               н
                                                                                                                                                                                                                                                                                             greater t
s derived
                                                                                                                                                                                                                                                                                                             NO
NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                               of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                   length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY Gapop 10.
                                                                                                                                                                                                                                                 Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                               hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ՄՏ
53
                                                                                                                                                                                                                                                                                                                               654321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             December
                                                                                                                                                                                                                                                                                                                                                                                                Minimum
Maximum
Listing
    Ø
                                                                                                                                                                                                                                                                                                                           Issued_Patents_NA:*
    /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
    /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
    /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
    /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
    /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
    /cgn2_6/ptodata/1/ina/backfiles1.seq:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gatccatggacaaat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -09
                                                                                                                                                                                                                                                                                                      н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyright
                                                                                                                                                                                                                                                                                                     the nu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07
     уd
                                                                                                                                                                                                                                                                                                                                                                                                                                                             satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             search,
                                                                                                                                                                                                                                                 Lengt!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                    0
20000000000
                                                                                                                                                                                                                                                                                                            number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57-
                                                                                                                                                                                                                                                                                           n or equal analysis c
                                                                                                                                                                                                                                                                                                                                                                                                  Match
Match
first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ouc,
    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapext
                                                                                                                                                                                                                                                                                                             0f
    ០%
100%
45 ន្ស
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŬΪ
US-08-875-233-5
US-08-875-233-14
US-08-875-233-14
US-08-090-193-14
US-08-488-031-14
US-08-488-027-14
US-08-482-658-14
US-08-482-658-14
US-08-475-610-14
US-08-475-610-14
PCT-US92-00278-11
US-08-488-031-11
US-08-488-031-11
US-08-482-658-11
US-08-482-658-11
US-08-482-658-11
US-08-482-658-11
US-08-482-653-11
US-08-482-658-11
US-08-475-610-11
PCT-US92-00278-11
PCT-US92-00278-11
US-08-475-610-11
PCT-US92-00278-11
US-08-488-031-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                               chosen
                                                                                                                                                                                                                                                                                                           result
                                                                                                                                                                                                                                                                                             였
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctgaa
                                                                                                                                                                                                                                                                                                                                                                                                   summa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03:53:58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
ξ
                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       version - 2004
                                                                                                                                                                                                                                                                                                     ts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mode1
                                                                                                                                                                                                                                                                                           s predicted by
le score of the
total score di
                                                                                                                                                                                                                                                                                                                                                                                                                                                             parameters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                residues
                                                                                                                                                                                                                                                                                                                                                                                                   .
ев
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Search (without a 710.789 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcgt
                                                                                                                                                                                                                                                                                            the :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ch time 5
t alignme
Million
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aaccgtcgacgagc
                                                                                                                                                                                                                                                                                            chance to hav result being istribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ltd
                                                                                                                                                                                                                                                                                                                             ÜÜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                              34901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ents)
                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            econd
                                                                                                                                                                                                                                                                                                            have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            updates/sec
                                                                                                                                                                                                                                                                                                   ve a
printed,
    53
5, Appli
14, Appli
14, Appli
14, Appli
14, Appl
11, Appl

                                                                                                                                                                                                                                                                                                                                  6
```

representation of the second

THE PARTY OF THE P

RESULT 1 US-08-875-233-5 UNDMENT OF INVENTION: APPLICANT: McMaster, J. Russell APPLICANT: McMaster, McMaster, McMaster, J. Russell COUNTRY: US-0.  ADDRESSEE: ROCKEY, Milnamow & Katz, Ltd. STRET: 2 Prudential Plaza, 180 N. Stetson, Suite CONTRES: OPENATION: POLYMER COUNTRY: US-0.  ZIP: 60089 STATE: Illinois COUNTRY: US-0.  ZIP: 60089 STATE: HINDOIS COUNTRY: US-0.  ZIP: 60089 STATE: HINDOIS COUNTRY: US-0.  ZIP: 60089 STATE: HINDOIS COUNTRY: US-0.  ZIP: 60089 STATE: CONTRESS: WS-DOS SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATAS- COUNTRY: US-0.  APPLICANT: NOTHER: US-08475, 233 FILING DATE: 26/JUN-1997  CLASSIFICATION UNDER: US-08475, 233 FILING DATE: AS/JUN-1997  APPLICANTION: 050 SOFTWARE: Lisa v. Mueller SOFTWARION: 050 SOFTWARION: MCMATION: MAME: Lisa v. Mueller SOFTWARION: 050 SOFTWARION: MCMATION: MAME: LISA v. Mueller SOFTWARION: W-034  FILIEBOX: 312-616-5400 INFORMATION: MCCE: ORGANISM: CUcumber mosaic virus STRAIN: V-34 FALTURE: MAME/KEY: CDS MAME/KEY: CDS COUNTRY: MCCE: OCCATION: / function="ENCAPSIDATES VIRUS OTHER INFORMATION: / function="ENCAPSIDATES VIRUS OTHER VIRUS OTHER MCCAULA / function="ENCAPSIDATES VIRUS OTHER VIRUS OTHER MCCAULA / function="ENCAPSIDATES VIRUS	28 45.8 86.4 152 2 US-08-486-569-9 29 45.8 86.4 152 2 US-08-488-027-9 30 45.8 86.4 152 2 US-08-090-192-9 31 45.8 86.4 152 2 US-08-482-663-9 32 45.8 86.4 152 3 US-08-470-349-9 34 45.8 86.4 152 3 US-08-475-610-9 35 45.8 86.4 152 3 US-08-090-193-13 37 45.8 86.4 154 2 US-08-090-193-13 38 45.8 86.4 154 2 US-08-090-193-13 39 45.8 86.4 154 2 US-08-486-569-13 49 45.8 86.4 154 2 US-08-090-192-13 41 45.8 86.4 154 2 US-08-090-192-13 42 45.8 86.4 154 3 US-08-482-663-13 43 45.8 86.4 154 3 US-08-482-658-13 44 45.8 86.4 154 3 US-08-470-349-13 45 86.4 154 3 US-08-470-349-13 45 86.4 154 3 US-08-470-349-13 45 86.4 154 5 PCT-US92-00277-13
of 127,60	Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 13, Appli Sequence 13, Appl Sequence 13, Appl

```
RESULT 2
US-08-875-233
; Sequence 14
; Patent No.
₽
D
J
                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-
                                              Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Ma
Best Loc
Matches
                                                                                         08-875-
                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
CLASSIFICATION: 600
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELEPHONE: 312-616-5460
TELEPHONE: 312-616-5460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION: APPLICANT: Boesho
                                                                                                                                                                                                                              TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 772 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: McMaster, J. Rus APPLICANT: Tricoli, David M APPLICANT: Reynolds, John F APPLICANT: Carney, Kim J TITLE OF INVENTION: Plants TITLE OF SEQUENCES: 15
                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: sing
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
                                                                                                                                ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Cucu
INDIVIDUAL ISOL
                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INI
OTHER INI
OTHER INI
OTHER INI
-875-233-5
                                                       Local
                                                                                       LOCATION: 375-233-14
                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
STREET: 2
CITY: Chic
STATE: Ill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: U.S.A.
ZIP: 60089
                                                                    Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46;
                                              Similarity 100.0%;
46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
INFORMATION:
INFORMATION:
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                   Chicago
: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1, Application 6127601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86.8%;
Similarity 100.0%;
6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
     Rockey, Milnamow
Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Boeshore,
                                                                                                                                  Cucumber ISOLATE:
                                                                                                  CDS
3..660
                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                   ase pairs
acid
                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plants Resistant
Cucumber Mosaic
                                                                                                                                  Mosaic
A35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08875233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product= "COAT
/gene= "CP"
/number= 1
/standard_name=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Russell
                                              0;
                                              Score 46; DB Pred. No. 4.9 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 46; DB
Pred. No. 4.9
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         & Kat:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "COAT
                                                                                                                                                                                                                                                                                                                                       233
                                                                                                                                                                                                                                                                                                                                                            Ç
                                                                                                                                                                                                                                                                                                                                                          Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "COAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROTEIN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 3; Le
                                                        DB
4.9
                                                         .9e-
                                                                  u
T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEIN"
                                               00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sui
                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                          te
                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0f
                                                                   772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49
                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                              Gaps
                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Veri
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 792 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: CUCUMBER MOSAIC VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
US-08-875-2
                                                                                                                                                                                     멍
                                                                                                                                                                                                               ş
                                                                                                                             RESULT 4
US-08-090-
                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                               ; NAME/KEY:
; LOCATION:
US-08-875-233-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JS/08875233

JON:

Boeshore, Maury L

ANT: Tricoli, David M

LICANT: Reynolds, John F

APPLICANT: Carney, Kim J

TITLE OF INVENTION: Plants Resist

TITLE OF INVENTION: Cucumber M

NUMBER OF SEQUENCES: 15

CORRESPONDENCE ADDRESS:

ADDRESSEE: Rockey, M

STREET: 2 Prudent

COUNTRY: Chicago

STATE: Illi

COUNTRY:

ZIP: *

TOMPUT

PONEY
                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 46
                                                                                    Sequence
Patent No
GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Patent No
GENERAL
                                        APPLICANT:
APPLICANT:
APPLICANT:
   APPLIC
TITLE
NUMBER
ce 14, Application US/08090193
No. 5641673
AL INFORMATION:
LICANT: Haseloff, James
LICANT: Brand, Andrea
LICANT: Perrimon, No. 5641673bert
LICANT: Goodman, Howard M.
LE OF INVENTION: Cell Ablation Usin
3ER OF SEQUENCES: 56
                                                                                                                               193-14
                                                                                                                                                                                                                                          th 86.8%; Score 46; DB
Similarity 100.0%; Pred. No. 4.1
46; Conservative 0; Mismatches
                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                4
                                                                                                                                                                                    CDS
3..660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plants Resistant
Cucumber Mosaic 1
                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             & Katz, Ltd.
180 N. Stetson,
                Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Virus
                                                                                                                                                                                                                                        DB 3; LC. 4.9e-09; 0;
                 Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strains
                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suite 4700
                                                                                                                                                                                                                                             Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  o
f
                                                                                                                                                                                                                                                                     792;
                  Ribozymes
                                                                                                                                                                                                                                           <u>.</u>
                                                                                                                                                                                                                                           Gaps
```

0;

CORRESPONDENCE

ADDRESS:

ADDRESSEE:

COUNTRY:

U.S.A.

Washington

1100 New

Sterne, Kessler, G O New York Avenue,

Goldstein & , Suite 600

Fox

D.C.

20005

```
RESULT 5
US-08-488-031-14
                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                             Sequence 14
Patent No.
GENERAL II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/090,193
FILING DATE: 23-DEC-1993
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (202) 371-254 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
      COUNTRY: U.S.A.

ZIP: 20005

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DO

SOFTWARE: Patentin Release #1.

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/488,

FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEPAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                             NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
ADDRESSEE: Sterne,
                                                                                                                                                                                                                                         APPLICANT: Goodman TITLE OF INVENTION:
                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             090-193-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic a
STRANDEDNESS: 1
                                                                                                                                                                   STREET:
CITY: V
                                                                                                                                                        STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                          14,
                                                                                                                                                                                                                                                                                                                INFORMATION:
  APPLICATION
                                                                                                          U.S.A.
20005
R RF*
                                                                                                                                                                                                                                                                                                                            4, Application 5849548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86.4%;
Similarity 95.9%;
7; Conservative
                                                                                                                                                                 Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                      GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                 : Sterne, Kes
                                                                                                                                                                                                                                                    Goodman,
                                                                                                                                                                                                                                                                Brand, Andrea
Perrimon, No.
                                                                                                                                                                                                                                                                                               Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            both
DATA
             ER: US/08/488,031
                                                                                                                                                                                                                                         Howard
Cell Al
                                                                                                                                                                                                                                                                                                James
                                                                                                                                                                                                                                                                                                                                          US/08488031
                                                                                                                                                                                                sler,
                                                                                                                                                                                    Avenue
                                                                                                                                                                                                                                         rd M.
Ablation
                                                                                                                                                                                                                                                                     5849548bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 45.8; D
Pred. No. 3.6e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0609.
                                                       #1.0,
                                                                   SOG
                                                                                                                                                                                 Goldstein & Fo.
                                                                                                                                                                                                                                        Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version
                                                        Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.6e-09;
                                                                                                                                                                                                                                         Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                 Fox
te 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ∾ ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                         Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                             49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-486-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-488-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABELICANT: Brand, Andrea
APPLICANT: Brand, Andrea
APPLICANT: Perrimon, No. 5863774bert
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Cell Ablation Using Tr
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler
STREET: 1100 New Yor'
CITY: Washingr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No. 5805.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3080000
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 01
FILING DATE: 23-DEC-11
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PORTION NUMBER: PORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPI
FILI
PRIOR
APPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/486,569 FILING DATE: 07-JUN-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ING DATE: 23-DEC-
APPLICATION DATA:
LICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       031-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n 86.4%;
Similarity 95.9%;
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : 130 base pairs nucleic acid SDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MBER: 08/090,193
23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                    MBER: 08/090,193
23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT/US92/00277
                                                                   35,086
R: 0609.3080006/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0609.3080002/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 45.8; DB 2;
Pred. No. 3.6e-09;
D; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Trans-Splicing Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

 $(x_{i+1}, x_{i+1}) \in \operatorname{Constraint}(A_i) \times \operatorname{Const$ 

ii ii

and the state of t

```
RESULT 7
US-08-488-0
; Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 586
GENERAL INFORMAPPLICANT:
APPLICANT:
APPLICANT:
                                                                                                     TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Best I
                                  Query
Best 1
                                                                     -08-4
                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX:
INFORMATION E
SEQUENCE CH
                                                                                                                                                                                                                     FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
TITLE OF IN
                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,027
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
                                                                                                                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                 FILING DATE: 23-DEC-
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 20005
COMPUTER READABLE
MEDIUM TYPE: F:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
COUNTRY: L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      486-569-14
                                                                                                                                                                                      NAME: Bugaisky, Lawrence B. REGISTRATION NUMBER: 35,086 REFERENCE/DOCKET NUMBER: 06
                                    Local
                                                                                TYPE: nucleic ac STRANDEDNESS: bo TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                     88-027-
                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS
TOPOLOGY: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14, Application
). 5866384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48
                     % 86.4%; Similarity 95.9%; 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  n 86.4%;
Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X: (202) 371-25
N FOR SEQ ID NO:
CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic
GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGTCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : Sterne, Kessler, G
1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130 base
                                                                                                                                                                                                                                                                                                                                                                                                                                   U.S.A.
                                                                                                                                                  : (202)
(202) 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goodman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brand,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perrimon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
Floppy disk
M PC compatible
PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESS:
                                                                                                                                                                                                                                                                                                         MBER: 08/090,193
23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ase pairs
                                                                                            poth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Howard
Cell A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08488027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2540
                                                                                                                                                                                                                                                                                   PCT/US92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5866384bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ablation Using
                                                                                                                                                                                                                                                 07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 45.8; Pred. No. 3.6e

O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                        0609.
                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goldstein
                      d. No. 3.6e-
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N. W. ,
                                                                                                                                                                                        3080003/MAC/LBB
                                           45.8;
                                                                                                                                                                                                                                                                                                                                                                            Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8; Pr
3.6e-09;
2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  In & Fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Trans-Splicing
                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fox
                                                                                                                                                                                                                                                                                                                                                                              #
                                  092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                        ∾
                                             Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ribozyme
49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96
                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                       Gaps
                       0
```

```
RESULT 8
US-08-090-
                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                      US-08-482-
                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                       -060-80-SD
                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/ US 92
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,
APPLICATION NUMBER: US 07/642,
APPLICATION NUMBER: US 07/642,
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
                                                                                                                                      Sequence
Patent No
GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 14 Patent No.
                                                                                                                                                                                                                                                                                                                        Query
Best I
                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL
APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: U.S.A.

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Ve

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/090,192

FILING DATE: 11-NOV-1993
                                               NUMBE
                                                                                            APPLI
                                                                                                          APPLI(
                                 CORRE
                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Haseloff, James
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Trans-Splicing Ribozymes
NUMBER OF SEQUENCES: 51
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein & Fo:
                                                                               APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESS
STREET:
CITY:
STATE:
   STR
                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 130 base pairs TYPE: nucleic acid STRANDEDNESS: both
                  ADD
                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                       Ma
LICANT: Haseloff, James
LICANT: Brand, Andrea
LICANT: Perrimon, No. 5882907bert
LICANT: Goodman, Howard M.
LE OF INVENTION: Cell Ablation Usin
BER OF SEQUENCES: 56
RESPONDENCE ADDRESS:
DDRESSEE: Sterne, Kessler, Goldstei
TREET: 1100 New York Avenue, N.W.,
                                                                                                                                                                                                                                                                                                                           Ü
                                                                                                                                  INFORMATION:
                                                                                                                                                                                                                                                                                                                         tch
al (
                                                                                                                                                     663-14
14, Application US/08482663
o. 5882907
                                                                                                                                                                                                                                                                                                                                                                      192-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14, Application US/08090192
5. 5874414
                                                                                                                                                                                                                                                 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                          47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washington
D.C.
                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                1100 New
                                                                                                                                                                                                                                                                                                         86.4%;
ilarity 95.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                       hoth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sterne, Kessierne,
                                                             Ablation Using Trans-Splicing Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07/642,
                                                                                                                                                                                                                                                                                                         Score 45.8; DB 2;
Pred. No. 3.6e-09;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0609.3030001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goldstein &
e, Suite 600
  Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Version #1.25
                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                        130;
                                                                                                                                                                                                                                                 96
                                                                                                                                                                                                                                                                               49
                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                            0
``
```

Washington

FORM:

```
RESULT 10
US-08-482-658-14
                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                            Sequence 14
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                      GENERAL INFOR
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/482,66
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-482-663-14
                                                    ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V
                                                                                                                                                                                                                 APPLICANT: Perrimon,
APPLICANT: Goodman, H
TITLE OF INVENTION: C
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
ADDRESSEE: Sterne,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE F
MEDIUM TYPE: Flo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US92/00277 FILING DATE: 16-JAN-1992 PRIOR APPLICATION DATA:
         APPLICATION NUMBER: US/08/482,658 FILING DATE: 07-JUN-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                        STREET:
CITY: V
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                               14,
                                                                                                                                                                                                                                                                                                                                                                                                                                       48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \vdash
                                                                                                                                                                                                                                                                                                                                                  4, Application 6010904
                                                                                                                                                                                      Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86.4%;
Similarity 95.9%;
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGTCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                        D.C.
                                                                                                                                                                                                      1100 New
                                                                                                                                                     U.S.A.
                                                                                                                                                                                                                                                                                      Perrimon,
                                                                                                                                                                                                                                                                                                       Brand, Andrea
                                                                                                                                                                                                                                                                                                                       Haseloff,
                                                                                                                                                                                               Sterne, New
York
NUMBER:
                                                                                                                                                                                                                                 ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MBER: US/08/482,663
07-JUN-1995
                                                                                                                                                                                                                                                                            Howard
                                                                                                                                                                                                                                                             Cell Ablation Using
                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                                                                                                                                                                                                                               US/08482658
                                                                                                                                                                                                                                                56
                                                                                                                                                                                                                   Kessler,
                                                                                                                                                                                                                                                                                                                       James
08/090,193
                                                                                                                                                                                                     Avenue,
                                                                                                                                                                                                                                                                                          6010904bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0609.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 45.8; DB 2;
Pred. No. 3.6e-09;
Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S-DOS
#1.0,
                                                                                                                                                                                                   Goldstein & Fo., N.W., Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3080005/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                      Version
                                                                                                                                                                                                                                                             Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                              Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                      96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
RESULT 11
US-08-470-349-14
; Sequence 14, Applicatic
; Patent No. 6015794
; Patent INFORMATION:
Haselof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-482-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US92/
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/64
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/470,349
FILING DATE: 06-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,192
FILING DATE: 11-NOV-1993
APPLICATION NUMBER: PCT/ US 92/00278
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,333
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                TELEFAX: INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE ON NUMBER CORRESP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FIL:
PRIOR
                                                                                                                                                                                                                                                                                                                                                         COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid STRANDEDNESS: both TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY:
STATE:
                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS SOFTWARE: PatentIn Release
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CANT: Goodman, Howard M.
OF INVENTION: Trans-Splicing Ribozymes
R OF SEQUENCES: 51
SPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    658-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NG DATE: 23-DEC-1993
APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 86.4%;
Similarity 95.9%;
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4, Application US/08470349
6015794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                     D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1100 New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sterne, Kebbar
No New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JMBER: PCT/US92/00277
16-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0609.3080008/MAC/LBB
                                                                             0609.3030001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 45.8; DB 3;
Pred. No. 3.6e-09;
); Mismatches 2;
                                                                                                                                                                                                                                                                                                                              #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goldstein &
e, Suite 600
                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                               Version
                                                                                                                                                                                                                                                                                                                                #1.
                                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

<u>.</u>

```
RESULT 12
US-08-475-61(
; Sequence 14
; Patent No.
; GENERAL II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: nucleic; STRANDEDNESS: TOPOLOGY: both US-08-470-349-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          몽
망
                      5
                                                 Query Match
Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Ma
Best Loc
Matches
                                                                                                                                                                                   TELEPHONE:
TELEFAX: (2
INFORMATION FOR
                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,19
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/64
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REFERENCE/DOCKET NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0,

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/475,610

FILING DATE: 07-JUN-1995
                                                                                                       08-475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Haseloff, James
APPLICANT: Brand, Andrea
APPLICANT: Perrimon, No. 6071730bert
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Cell Ablation Us
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
COUNTRY: U
                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                  TOPOLOGY:
                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -610-14
                                                                                                      610-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14, Application 6071730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48
48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             47;
                                               h 86.4%;
Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            n 86.4%;
Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                         130 base pairs nucleic acid
GAGTCATGGACAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
             GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : Sterne, Kessler, G
1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         base paid
ic acid
both
                                                                                                                                                                                                                                                                                                                                                                       MBER: 08/090,193
23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                              MBER: US/08/475,610
07-JUN-1995
                                                                                                                              both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08475610
                                                                                                                                                                                                                                                                                                                                               PCT/US92/00277
                                                                                                                                                                                                                                                 96
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 45.8; D
Pred. No. 3.6e
0; Mismatches
                                                 Score 45.8; DB Pred. No. 3.6e-00; Mismatches
                                                   0
                                                                                                                                                                                                                                        0609.3080004/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                      #1.0,
                                                                                                                                                                                                                                                                                                         642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goldstein & Fo, N.W., Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 3;
.6e-09;
es 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Trans-Splicing
                                                                          Ed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fox
:e 600
                                                  09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                   Indels
                                                                            130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96
                        49
96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>0</u>
                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                   0
```

```
RESULT 13
PCT-US92-00
; Sequence
; GENERAL
                                                                                                                                                                                                                                                                                  RESULT 14
PCT-US92-0
                                                                                                                                                                                                                                                                                                                                                      엉덩
                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Sterne, Kessler, Goldstei STREET: 1225 Connecticut Avenue, N.W. CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 19920116
CLASSIFICATION UMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Goldstein, Jorge A
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0609.349660
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)833-7533
TELEPHONE: (202)833-7533
TELEPHONE: (202)833-753
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 bases
TYPE: NUCLEIC ACID
STRANDEDNESS: both
TOODOLOGY: 1 inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLEC
CT-US92-(
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
Matches 4
                                                                                                                                                                                                                                                Sequence
GENERAL
APPLICANT: Haseloff, James
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Trans-Splicing Ribozymes
NUMBER OF SEQUENCES: 51
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein & Fox
STREET: 1225 Connecticut Avenue, N.W., Suite
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLIC
TITLE
NUMBER
CORRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DABES NUCLEIC ACI STRANDEDNESS: bot TOPOLOGY: linear NOLECULE TYPE: DNA 92-00277-14
                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                            14, Application PC/TUS9200278, INFORMATION:
CANT: Haseloff, James
CANT: Goodman, Howard M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CANT: Goodman, Howard M.
CANT: Brand, Andrea
CANT: Perrimon, Norbert
OF INVENTION: Cell Ablation Using
R OF SEQUENCES: 56
SPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESSEE: Sterne, Kessler, Goldstein & EET: 1225 Connecticut Avenue, N.W., S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14, Application PC/TUS9200277 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                       48
                                                                                                                                                                                                                                                                                                                                                                                                                En 86.4%;
Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                                                                                     GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Haseloff, James
Goodman, Howard M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCT/US92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                      Score 45.8; DB 5;
Pred. No. 3.6e-09;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0609.3496604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Version #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trans-Splicing
                                                                                                                              k Fox
Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                           0
,.
                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

```
RESULT 15
US-08-090-193-11
; Sequence 11, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: L
MOLECULE TYPE:
CT-US92-00278-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Goldstein, Jorge A
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)833-7533
TELEFAX: (202)833-8716
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. GENERAL II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 86.4%;
Best Local Similarity 95.9%;
Matches 47; Conservative
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609.3080001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                          SOFTWARE: Patentin Release #1.0, Ver.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/090,193
FILING DATE: 23-DEC-1993
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                          COUNTRY: U.S.A.
ZIP: 20005
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Haseloff, Jan APPLICANT: Brand, Andrea APPLICANT: Berrimon, No. APPLICANT: Goodman, Howa TITLE OF INVENTION: Cell NUMBER OF SEQUENCES: 56 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/US
FILING DATE: 19920116
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: NUCLEIC STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11, Application US/08090193
o. 5641673
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Washington
                                                                                                                                                                                                                                                                                                                                             D.C.
U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    130 bases
                                                                                                                                                                                                                                                                                                                                                                                                                 1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goodman, Howard M.
VENTION: Cell Ablation Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Perrimon, No. 5641673bert Goodman, Howard M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brand, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACID
Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/US92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07/642,333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0609.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 45.8; DB 5;
Pred. No. 3.6e-09;
); Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                  Goldstein &
e, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3476604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Version #1.
                                                                                                                                                                                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Trans-Splicing
                                                                                                                                                                                                                                                                #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>
```

0;

. <del>Marie de</del> la company de la

Search completed: December 5, 2004, 06:38:56 Job time : 53 secs

This Page Blank (uspto)

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    earched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  equence
                                                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          on:
       10
10
10
11
12
12
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       processing:
                                                                                                                                                                                                                                                                                                                                                                  Pred. Name of score of and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tabl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    score
    core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq
pea
                                                                                                                                                                                                                                                                                                                                                                No. is the number of results greater than or equal to the derived by analysis of the desired by analys
                                                                                                                                                                                  444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                   Published Applications NA:*

1: /cgn2_6/ptodata/2/pubpna/US07 PUBCOMB.seq:*

2: /cgn2_6/ptodata/2/pubpna/PCT NEW PUB.seq:*

3: /cgn2_6/ptodata/2/pubpna/US06 NEW PUB.seq:*

4: /cgn2_6/ptodata/2/pubpna/US06 PUBCOMB.seq:*

5: /cgn2_6/ptodata/2/pubpna/US07 NEW PUB.seq:*

6: /cgn2_6/ptodata/2/pubpna/US07 NEW PUB.seq:*

7: /cgn2_6/ptodata/2/pubpna/US08 NEW PUB.seq:*

9: /cgn2_6/ptodata/2/pubpna/US09 PUBCOMB.seq:*

10: /cgn2_6/ptodata/2/pubpna/US09 PUBCOMB.seq:*

11: /cgn2_6/ptodata/2/pubpna/US09 PUBCOMB.seq:*

13: /cgn2_6/ptodata/2/pubpna/US09 NEW PUB.seq:*

14: /cgn2_6/ptodata/2/pubpna/US09 NEW PUB.seq:*

15: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

16: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

17: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

18: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

19: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDENTITY_NUGapop 10.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-857-8
53
1 gatccatgg
                                                                                                                                                                                                                                                             Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3694831
     gatccatggacaaatctgaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyright
     satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               search,
                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000000000
    771
772
792
772
772
960
983
1068
1068
1680
642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
Match
first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2004,
                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapext
     2747406616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0%
100%
45 នា
3 US-10-011-033-5

3 US-10-011-033-14

3 US-10-011-033-3

3 US-10-011-033-1

3 US-10-011-033-1

3 US-10-011-033-11

US-08-961-527-373

6 US-10-158-844-373

6 US-10-424-599-77125

5 US-10-369-493-37626

0 US-09-905-666A-20

US-10-437-963-47739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ø
€
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06:09:28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \vdash
                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         parameters
                                                                                                                                                                                                                                                                                                                                                                  total s
                                                                                                                                                                                                                                                                                                                                                               predicted by chance to have a score of the result being printed, otal score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B ; Search (without a 1277.303 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gtcgtaaccgtcgacgagct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h time 228 Sec
alignments)
Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7389
                                                                                                                                                                                                                                                               Description
Sequence 3
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                      Sequence 5
Sequence 1
Sequence 3
Sequence 1
Sequence 9
Sequence 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                updates/sec
    373, App
e 373, App
e 37125, A
e 37626, A
e 20, Appl
e 47739, A
                                                                                                                      5, Appli
14, Appli
3, Appli
1, Appli
9, Appli
1 INFORMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ហ
```

R e

OB OB OB		
SULT 1 -10-01 Sequen Public GENE	<b>ユエナエエエスののののののののののののののののののは、ままままました。 日本ちら 100 まり </b>	
1-033-5 ICE 5, Applice 5, Applice 5, Applice No. US ation No. US RAL INFORMATAL INFORMATAL INFORMATAL INFORMATAL INFORMER OF STATE; COMPUTER RIMEDIUM COMPUTER RIMEDIUM COMPUTER RIMEDIUM COMPUTALING CLASSIPELING APPLICENT APPLI		
Application UNAPPLICATION: LICANT: Boeshor McMaste Tricoli Reynold Respondence Addresse: Respondence Addresse: Respondence Respondence Respondence Respondence Repondence Repondence Repondence Readable Medium Type: Computer: IBM OPERATING SYS SOFTWARE: Pattent Application New Application New Application Repolication New Application New Resylagent INF NAME: Lisa V.  3COMMUNICATION New Respondence Responde	44444444444444444444444444444444444444	
	2718 122859 536165 136165 1186 1186 1186 1186 1186 1256646 2256646 1255 1488 11554 14800 401616 1309	
FEX-BIT - BOCK COR DESCRIPTION BIO CONTROL OF THE COLUMN BIO COLUM	113 113 113 113 113 113 113 113 113 113	
laury L [. Russell [. Russell [. Aid M [. Russell [. Ants Resistant to C Strains [. ants Resistant to C Strains [. ants Resistant to C Strains [ Itd. [. ants Resistant to C Strains [	US-10-437-963-34792 US-10-087-192-37 US-09-939-964-1 US-10-027-632-200344 US-10-027-632-200344 US-09-738-626-773 US-10-369-493-36410 US-10-369-493-36410 US-10-021-723A-7 US-10-767-795-1977 US-10-470-565-1 US-09-923-876-1370 US-09-923-876-1370 US-10-653-047-7425 US-10-425-114-35778 US-10-425-114-35778 US-10-425-115-9544 US-10-425-115-9544 US-10-425-115-9544 US-10-425-115-9544 US-10-628-525-4 US-10-628-525-4 US-10-628-525-4 US-10-437-963-1141 US-10-437-963-1145 US-10-425-115-94987 US-10-425-115-94987 US-10-425-114-10976 US-10-425-114-10976 US-10-425-114-10976 US-10-425-114-10976	
s of	Sequence 34792, A Sequence 1, Appli Sequence 200344, Sequence 200344, Sequence 200344, Sequence 200344, Sequence 773, App Sequence 1, Appli Sequence 55, Appli Sequence 55, Appli Sequence 55, Appli Sequence 1, Appli	

```
RESULT 2
US-10-011-033-14
; Sequence 14, Application US/10011033
; Publication No. US20020124286A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 46
STREET: 2 Pru...

STREET: 2 Pru...

CITY: Chicago
STATE: Illinois

COUNTRY: U.S.A.

ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.

CURRENT APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-NO. US20020124286A1-2001
CLASSIFICATION LOATA:
APPLICATION NUMBER: US/00/0124286A1-2001
PRIOR APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELEPHONE: 312-616-5460
TELEFAX: 312-616-5460
TELEFAX: 312-616-5460
TELEFAX: 312-616-5460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-011-
                             INFORMATION FOR SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 771 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: Cucumber mosai
                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF
CORRESPOND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
L-033-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: 3..660
LOCATION: 3..660
OTHER INFORMATION: /codon_start= 3
/function= "ENCAPSIDATES VIRUS RNA"
/product= "COAT PROTEIN"
/gene= "CP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 46; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 312-616-54
TELEFAX: 312-616-5460
ON FOR SEQ ID NO: 5:
JENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                           SPONDENCE
ADDRESSEE
                                                                                                                                                                                                                                                                                                                                                                                                                 OF
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard
                                                                                                                                                                                                                                                                                                                                                                                                              Carney, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCES: 15
ENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                   Tricu-
Reynolds, uu...
They, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Boeshore, Maury L
McMaster, J. Russell
Tricoli, David M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                name=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86.8%;
100.0%;
tive (
                                                                                                                                                                                                                                                                                                                                                                                                  Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "COAT PROTEI
                                                                                                                                                                                                                                                                                                                                                                                                                                           John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 46;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROTEIN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ore 46; DB 13;
Ted. No. 1.5e-08;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ហ
                                                                                                                                                                                                                                                                                                                                                                                                   Virus
                                                                                                                                                                                                                                                                                                                                             , Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                        #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                               Suite
                                                                                                                                                                                                                                                                                                                                                                                                                ရှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49
                                                                                                                                                                                                                                                                                                                                                4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULT 3
US-10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ús-10-011-c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -10-011-033-3
Sequence 3, Application US/10011033
Publication No. US20020124286A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                   INFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Loca
                                                                                                             STREET: 2 Prudential Plaza, 180 N. Stetson, CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1
CURRENT APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2001
CLASSIFICATION: UNCHORN:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
TELEPHONE: 312-616-5460
ORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 702 base nairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match
                                              LENGTH: 792 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: 3..660
SEQUENCE DESCRIPTION: :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 772 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
              OPHZ
                                                                                                                      Ø
                                                                                                                                                                           Н
                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                             O
                                                                                                                                                                                                                                                                                                                                                                                                                                                        QZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AL INFORMA
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGINAL SOURCE:
ORGANISM: Cu
INDIVIDUAL I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
RIGINAL SOURCE:
ORGANISM: C
                        YPOTHETICAL: I
                                                                                                                                                                                                                                                                                                                                                                                                                            UMBER OF SEQUENCES: 15
ORRESPONDENCE ADDRESS:
   ADDRESSEE: Rockey, Milnamow & Katz,
   STREET: 2 Prudential Plaza, 180 N. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n 86.8%;
Similarity 100.0%;
46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ICANT: Boeshore, Maury L
McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
Carney, Kim J
Cucumber Mosaic Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cucumber Mosaic
L ISOLATE: A35
CUCUMBER MOSAIC VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 1.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14:
                                                                                                                                                                                                                                                                                                                                                                                                                             Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                           Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Straine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                            #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
;-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
RESULT 4
US-10-011-033-1
; Sequence 1, Application US/1001103
; Publication No. US20020124286A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: CDS;
LOCATION: 3..660;
SEQUENCE DESCRIPTION: 09-10-011-033-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                              NAME/KEY: CDS;
LOCATION: 3..66;
SEQUENCE DESCRIPTION: US-10-011-033-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Ma
Best Loc
Matches
  Query Match
Best Local
                                                                                                                                                                                                     TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 772 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                    ANTI-SENSE: NO ORIGINAL SOURCE:
                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                         ATTORNEY/AULICE
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION: 312-616-5400
                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE
                                                                                   FEATURE:
                                                                                                                                            HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ß
   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
STREET: 2 P
CITY: Chica
STATE: Illi
                                                                                                                                                                   TOPOLOGY - wase pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86.8%;
imilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                         ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN:
                                                                                               INDIVIDUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OH
OH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carney, K INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                      60089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chicago
:: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCES: 15
ENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boeshore, Maury L
McMaster, J. Russe
Tricoli, David M
Reynolds, John F
Carney, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Rockey, M: 2 Prudential
                                                                                                                                              ö
                                                                                               Cucumber ISOLATE:
  83.8%;
97.8%;
                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ
                                                SEQ
                                                                                               Mosaic
: V-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 46; DB Pred. No. 1.50; Mismatches
Score Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plaza,
                                                 IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                  S
O
 44.4;
No. 6
                                                                                                           Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            & Katz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w
                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           t to C
Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 13; 1
1.5e-08;
   8e-
                                                                                                                                                                                                                                                                                                                                                                                     Version
             DB
  3 13;
·08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ·.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
```

```
RESULT 5
US-10-011-033-9
; Sequence 9, Application US/10011033
; Publication No. US20020124286A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
 9
                     $
                                                                                           US-10-011-
                                            Matches
                                                        Query Match
Best Local (
                                                                                                                                                                                                                                                                                INFORM
                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #3
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
DRMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH. 960 base Dairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF
CORRESPOND
                                                                                                      ഗ
                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                           0 >
                                                                                                                                                                                                工区
                                                                                                                                                                                                                                                                                                                   Н
                                                                                                                                                                                                                                                                                                                                                                                                                         O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H
                                                                                                                                                            ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: CU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow
STREET: 2 Prudential Plaza,
CITY: Chicago
STATE: Illinois
                                                                                           033-
                                                                                                     NAME/KEY: CDS
LOCATION: 1..659
EQUENCE DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ITLE
                                                                                                                                        EATURE:
                                                                                                                                                                                               OLECULE TYPE YPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45;
                                              43;
Similarity 97.7%; Similarity 97.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                    STRAIN:
                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
F INVENTION: Plants Resistant t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Boeshore,
                                                                                                                                                    STRAIN
                                                                                                                                                                                                  ĕ
                                                                                                                                                    CUCUMBER MOSAIC
                                                                                                                                                                                                                                             base pairs
                                                                                                                 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Maury L
                                                                                                      SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Russell
                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                            Score 42.4; DB 13;
Pred. No. 4.8e-07;
); Mismatches 1;
                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                       .
No
                                                                                                                                                                VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         & Katz, Ltd.
180 N. Stetson,
                                                                                                       9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                  Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                    #1.
                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                    30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49
                                                                   960;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4700
                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                              0;
```

RESULT 6 US-10-011-0

033-11

```
US
US
                                                                                                                                                                  Sequence 373, Application US; Publication No. US2002003232; GENERAL INFORMATION:
APPLICANT: Charles Kunsc TITLE OF INVENTION: Street NUMBER OF SEQUENCES: 391; CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                   ESULT 7
/S-08-961-527-37
---ance 373,
                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                         -10-011-033-11
ZIP: 20850

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 3.50 in COMPUTER: HP Vectra 486/33

COMPUTER: HP Vectra 486/33

OPERATING SYSTEM: MSDOS version SOFTWARE: ASCII Text

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/961

FILING DATE:

CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Boes
                                                                                                                                                                                                                                                                                                                                                                                                      COMPULENT
OPERATING SYSTEM: ...
SOFTWARE: PatentIn Release ***...
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-20
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
JOURNAL: J. Gen. Virol.
VOLUME: 70
                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                           STREET:
CITY: F
STATE:
                                                                                                                COUNTRY:
                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 60089
COMPUTER READABLE F
MEDIUM TYPE: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCE AND CORRESPONDENCE AND RESSEE: 2 PER CITY: Chical STATE: Illi:
                                                                                                                                                                                                                                                                                                                                                                                                   DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                             32;
                                                                                                                                                                                                                                                                                                                       Q
                                                                                                               Rockville
Maryland
Y: USA
                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                               COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OF.
                                                                                                                                                                                                                                                                                                                                            46.8%; ilarity 72.7%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                  ES: 1065-1073
E: 1989
DESCRIPTION: S
                                                                                                                                                                                                                           plication US/089615
US20020032323A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Carney, INVENTION:
                                                                                                                                                          Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCES: 15
ENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chicago
: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Reynolds, Joh
Carney, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         McMaster, J. Ru
Tricoli, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boeshore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rockey, Milnamow Prudential Plaza,
                                                                                                                                                   West
                                                                                                                                                                                                         Kunsch
                                                                                                                                                            Genome
                                                                                                                                                                                  Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumber Mosaic V
                        US/08/961,527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                John
                                                                                                                                                   Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maury
                                                                                                                                                                                                                                                                                                                                                                                                    Ø
                                                                                                                                                          Sciences,
                                                                                                                                                                                                                                                                                                                                                                                                    Ö
                                                         versi
                                                                                                                                                                                                                                                                                                                                          Score 24.8; D
Pred. No. 7.8;
O; Mismatches
                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Russell
                                                                                                                                                                                                                                                                                                                                                                                                     UI
                                                                                inch,
                                                         on 6
                                                                                                                                                                                                                                                                                                                                                                                                     ö.
                                                                                                                                                                                             pneumoniae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H R
                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  k Katz,
L80 N.
                                                                                <u>ቆ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t to C
                                                                                                                                                                                                                                                                                                                                                       æ
~:
                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version
                                                                                stora
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                                                            12;
                                                                                                                                                                                                                                                                                                                                                                  13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          St
                                                                                                                                                                                              Polynucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #1
                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sui
                                                                                                                                                                                                                                                                                                                        49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õŧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  t
e
                                                                                                                                                                                                                                                                                                                                                                  983;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4700
                                                                                                                                                                                                                                                                                                                                             .
                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                            Sequences
                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT 8
US-10-158-
; Sequence
; Publicat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                 US-10-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-961-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Brookes, A. Anders
REGISTRATION NUMBER: 36,373
REFERENCE/DOCKET NUMBER: PB340P1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 309-8504
TELEFAX: (301) 309-8512
INFORMATION FOR SEQ ID NO: 373:
SEQUENCE CHARACTERISTICS:
LENGTH: 1068 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
IS-08-961-527-373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Mat
Best Loca
Matches
   Best Loca
Matches
                                Query
                                                                                                                                                             INFORMA
SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                       ence 373, Application US/10158844
ication No. US20040029118A1
NMERAL INFORMATION:
APPLICANT: Kunsch et al.
TITLE OF INVENTION: Streptococcus pneumoniae Po.
NUMBER OF SEQUENCES: 391
CORRESPONDENCE ADDRESS:
ADDRESSES: Human Genome Sciences, Inc.
STREET: 9410 Key West Avenue
CITY: Rockville
STATE: Maryland
COUNTRY: USA
ZIP: 20850
COMPUTER READABLE FORM:
MEDIUM TYPE: CD-R
COMPUTER EDIL Latitude Pentium 3
OPERATING SYSTEM: Windows 98
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/158,844
FILING DATE: 03-Jun-2002
CLASSIFICATION DATA:
APPLICATION NUMBER: US 60/029,960
APPLICATION NUMBER: US 60/029,960
FILING DATE: 1997-10-30
APPLICATION NUMBER: US 60/029,960
FILING DATE: 1996-10-31
ATTORNEY/AGENT INFORMATION:
NAME: Hyman, Mark J.
REGISTRATION NUMBER: US 60/029,960
FREGISTRATION NUMBER: PB340P1D1
FORMATION FOR SEQ ID NO: 373:
SEQUENCE CHARACTERISTICS:
LENGTH: 1068 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 373:
                                                                  8-
                                                                844-373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tch
  30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          n 45.3%;
Similarity 75.0%;
30; Conservative
1 45.3%;
Similarity 75.0%;
30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
   ·
•
   Score 24; DB Pred. No. 17; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 24;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
17;
                                 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             æ
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
  10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1068;
                                  Length 1068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polynucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
      0
```

```
RESULT 11
US-09-905-6
; Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
US-10-4
                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
US-10-369-493-37626
; Sequence 37626, Application US/10369493
; Publication No. US20030233675A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-1
                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: La Rosa Thomas J
APPLICANT: Kovalic David K
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Ac
TITLE OF INVENTION: Plants and Us
FILE REFERENCE: 38-21 (53223) B
CURRENT APPLICATION NUMBER: US/10/
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 285684
SEQ ID NO 77125
LENGTH: 352
TYPE: DNA
                                                                                                                                                                                                                                                        APPLICANT: Goldman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF M
TITLE OF INVENTION: PLANTS WITH IM
FILE REFERENCE: 38-10(52052)B
CURRENT APPLICATION NUMBER: US/10/3
CURRENT FILING DATE: 2003-02-28
                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 77125, Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                           ORGANISM: Pseudomonas -10-369-493-37626
                                                                                                                                                                                                                                                                                                                                                          APPLICANT: APPLICANT:
                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US
PRIOR FILING DATE: 2002-02-21
NUMBER OF SEQ ID NOS: 47374
EQ ID NO 37626
                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: 0-424-599-77125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Glycine FEATURE:
                                                                                                                                                                                              LENGTH: 1680
                                                                                                                        Local
                                                                                                                                   Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match
-666A-
                                                             021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        595-,
77125, Apr
No. US2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29;
                                                                                                           34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                           1 43.8%;
Similarity 65.4%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                             Cao, Yongwei
Hinkle, Gregory
Slater, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTGTGAATGAACCATTGCTGGTGGTAAACGTATATGA
                                                             GTTTCATGTGCGCATCTGAACGATGAATTGATGGCCGGCACCGAAGACGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATCTGCATCAACCAGTGCGTCACCTCAGCATCGACAAGC
                                                                                   GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGC
 Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44.5%;
larity 76.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10424599 US20040031072A1
                                                                                                                                                                                                                                                                                                                                                          Yongwei
le, Gregory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clone
                                                                                                                                                                       fluorescens
 US/09905666A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ID:
                                                                                                                                                                                                                                                                                                                                  လ က
                                                                                                                                                                                                                                                                     US/10/369,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/10/424,599
)4-28
                                                                                                                                                                                                                                                                                                                                                          C
                                                                                                                                                                                                                                               60/360,039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23.6; D
Pred. No. 19;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT_MRT3847
                                                                                                                      Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Uses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Acid
                                                                                                                                                                                                                                                                                                IMPROVED
                                                                                                                                                                                                                                                                                                          MICROBIAL
                                                                                                          Mismatches
                                                                                                                        23.2; i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Molecules
Thereof fo
                                                                                                                                                                                                                                                                                              PROPERTIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4065
                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
08
0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and Other Molecules or Plant Improvement
                                                                                                            18;
                                                                                                                                 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                            Indels
                                                                                                                                                                                                                                                                                                          Z
                                                                                                                                                                                                                                                                                                          PLANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            352;
                                                                                                                                   1680;
                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                          FOR
                                                                                   52
                                                             1072
                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                          PRODUCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                            0;
                                                                                                                                                                                                                                                                                                            ဝှု
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     With
                      RESULT 13
US-10-437-9
; Sequence
; Publicati
; GENERAL I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                            9
                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
  APPLICAN
APPLICAN
```

```
RESULT 12
US-10-437-
                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-905-
                                                                               US-10-437-
                                      Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                       Query Ma
Best Loc
Matches
                                                                                                                                        SEQ
                                                                                                                                                                                                                                                                                                      Publicat.
                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                            GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO
                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER O
SOFTWARE
                                                                                                                                                            CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: GIVER, LOR APPLICANT: MINSHULL,
                                                                                                         EQ ID NO 47739
LENGTH: 766
TYPE: DNA
ORGANISM: Oryz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE
                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                   NUMBER
                                                                                                                                                                                FILE RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                       FEATURE:
OTHER IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                                 Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE!
                                                                                                                                                                                                                                                                                                                                                                                                                            Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NT FILING DATE: 2002-10-15
APPLICATION NUMBER: 60/217,954
FILING DATE: 2000-07-13
APPLICATION NUMBER: 60/300,378
FILING DATE: 2001-06-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                            0
                                                                                                                                                                                                    Ö
                                                                                                                                                                                                                                                                 INFORMATION:
INFORMATION:
Thomas (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O 20
: 642
                                                                                                                                                                                                                                                                                                                                                                                                                  tch
al (
300
                                                                              INFORMATION: 963-47739
                                                                                                                                                                               NT: Li, Ping
F INVENTION: Rice Nucleic Acid Molecules a
F INVENTION: Plants and Uses Thereof for
FERENCE: 38-21(53221)B
                                                                                                                                                                                                                                                                                                     963-47739
47739, Application US/104379
ion No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                 666A-
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
SM: Bacillus sp
                                                                                                          SM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ON NO. US20
                                                           S
C
                                                                                                                                                 APPLICATION NUMBER: US/1
FILING DATE: 2003-05-14
)F SEQ ID NOS: 204966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ERENCE: 0184.310US
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                        th 43.0%;
Similarity 66.0%;
33; Conservative
                                       30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INVENTION: NOVEL LIPASE GENES
                   N
                                                                                                                                                                                                                                                                                                                                                                                     4
                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NOS: 111 PatentIn Ver. 2.
                                                                                                                                                                                                                                                                                                                                                                CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT
AACCTTGTCCAACTCGGACTCTGCCAATCCTGGTCGTAGCCG 341
           ATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCG
                                                                                                                                                                                                                                           Zhou, Yihua
Cao, Yongwei
Wu, Wei
                                                                                                                                                                                                                      Boukharov,
Barbazuk, F
                                                                                                                                                                                                                                                            Kovalic, Dav
                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VOGEL, KURT
                                      43.0%;
ilarity 71.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US20030096390A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LORRAINE
                                                                                        Clone
                                                                                                                                                                                                                        Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JEREMY
                                                                                                                                                                                                                                 Andrey A.
                                                                                        ID:
                                                                                                                                                                                                                                                                         <u>ኞ</u> 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       us/09/905,
                                                                                                                                                                      US/10/437,963
                                                                                       PAT_MRT4530_50479C.1
                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                      Score 22.8; D
Pred. No. 48;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                        Score 22.8; D
Pred. No. 46;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        666A
                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                           BB
                                                                                                                                                                                                                                                                                                                                                                                                                            10;
                                                         17;
                                      12;
                                                                                                                                                                                                                                                                                                                                                                                                        17;
                                                                                                                                                                                                     and Other Molecules
                                                                                                                                                                                           Plant
                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                       Indels
                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                            Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                             642;
                                                           σ̈
                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                      53
                                                                                                                                                                                                                                                                                                                                                                  485
                                                                                                                                                                                                                                                                                                                                                                                                        0
                                       0;
                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                      Associated
                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                          ..
O
                                                                                                                                                                                               M) t W
```

-963-34792/c
e 34792, Application US/1
le 34792, Application US/1
le 34792, Application US/1
le 34792, Thomas J.
lant: La Rosa, Thomas J.
lant: Kovalic, David K.

US/10437963

```
WS-10-087-192-37/c

; Sequence 37, Application US/10087192
; Publication No. US20020182586A1
; GENERAL INFORMATION:
APPLICANT: Morris, David W.
APPLICANT: Morris, David W.
APPLICANT: Engelhard, Eric K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND M
TITLE OF INVENTION: CANCER
FILE REFERENCE: 529452000122
; CUURENT APPLICATION NUMBER: US/10/087,192
; CUURENT FILING DATE: 2002-03-01
; PRIOR APPLICATION NUMBER: US 09/747,377
PRIOR FILING DATE: 2000-12-22
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 2059
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 122859
; TYPE: DNA
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)...(122859)
; OTHER INFORMATION: n = A,T,C or G
US-10-087-192-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Cao,
APPLICANT: Wu, Wei
APPLICANT: Wu, Wei
APPLICANT: Boukharov, A...
APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acio
TITLE OF INVENTION: Plants and Uses There-
FILE REFERENCE: 38-21 (53221) B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
TO ID NO 34792
TH: 2718
Ta sativa
                                                                                                                                멍
                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  日
                                                                     US-09-939-964-
                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 28
                                                                                                                                                                                     Query Naest Lo
Sequence 1, Application US/09939964
Publication No. US20030054522A1
GENERAL INFORMATION:
APPLICANT: Rosenthal, Andre
APPLICANT: Freiberg, Christoph
                                                                                                                                                                                                  Local
                                                                                                                                                                                                                 Match
                                                                                                                                                                                       Ø
                                                                                                                               9102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16
                                                                                                                                                                                   h 42.6%;
Similarity 75.7%;
28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28;
                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 42.6%;
Similarity 75.7%;
28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĊŢĠĀĀĀĊĀŢĠĊĊĠĊĠĊŢĠĠĊĀĠŢĀĀĊĊĠĠĀĠĀĊĠĀĠĊ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGC
                                                                                                                                AGCCTTGGÁCAAATCTTAATGAACGATTGGTGGAGGT
                                                                                                                                                        ATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGT
Andre
Christoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 22.6; D
Pred. No. 80;
0; Mismatches
                                                                                                                                                                                       0
                                                                                                                                                                                     Score 22.6;
Pred. No. 2.1
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         I Molecules
Thereof for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _38773C.1
                                                                                                                                                                                                DB 1:
le+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       METHODS
                                                                                                                                                                                       Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DВ
                                                                                                                                                                                                                i.
                                                                                                                                                                                       9 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                  9066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52
                                                                                                                                                           3
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FOR
                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ner Molecules
Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27
                                                                                                                                                                                                                   122859
                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
O
                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         With
```

```
8
                       S
                                                                                                   -Sn
                                                                                                PRIOR APPLICATION NUME
PRIOR FILING DATE: 199
NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn Ver
SEQ ID NO 1
LENGTH: 536165
TYPE: DNA
ORGANISM: Rhizobium
JS-09-939-964-1
                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                            FILE REF
CURRENT
CURRENT
                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
TITLE OF IN
TITLE OF IN
FILE REFERS
                                                               Loca
                                                                         Mat
 25
                                                                                                                                                                          CANT: Perret, Xavier Philippe
CANT: Broughton, William John
OF INVENTION: Genomic Sequence of
OF INVENTION: Plasmid
REFERENCE: CARPO068
NT APPLICATION NUMBER: US/09/939,96
NT FILING DATE: 2001-08-27
APPLICATION NUMBER: 09/214,808
FILING DATE: 1999-06-22
R OF SEQ ID NOS: 1
007
                                                               <u>a</u>1
                                                                         tch
                                                 31;
                          φ
                                                 1 42.6%;
Similarity 68.9%;
%1; Conservative
                                                                                                                                                                   PatentIn Ver.
                       GACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT
 GACGAACGTGGATCATGACGTGCTGATCGCAACGCTCGACCGGCT
                                                                                                                                                                    2.1
                                                <u>,</u>
                                                 Score 22.6; DB
Pred. No. 3e+02;
); Mismatches
                                                                                                                                                                                                                                                                      of Rhizobium SP.
                                                                                                                                                                                                                                 964
                                                                          DB 10;
                                                 14;
                                                                         Length 536165;
                                                   Indels
                                                                                                                                                                                                                                                                      NGR
                          53
 525051
                                                                                                                                                                                                                                                                      234
                                                 0
                                                                                                                                                                                                                                                                      Symbiotic
                                                  Gaps
                                                   0
```

Search completed: December 5, 2004, 07:06:42 Job time : 232 secs

OM nucleic nucleic Copyright search, GenCore (c) 1993 neing 3 version - 2004 model 5.1.6 Compugen Ltd

Run

on:

December

ហ

2004,

06:13:23

3 ; Search (without a 1258.911 M

h time 221 Sec alignments) Million cell

updates/sec

Seconds

Title: Perfect : Sequence: score: US-09-857-841-3 53 1 gatccatggacaa gatccatggacaaatctgaa .gtcgtaaccgtcgacgagct S

table: NUC

Gapext 60. 0

Scoring

OLIGO\_ Gapop 60.0

4134886 2624710521

Searched: segs, residues

Word **size** Q

Total number 0f hits satisfying chosen parameters: 8269772

Minimum Maximum DB DB seq seq length: 0 2000000000

Post-processing: Listing first 45 summaries

Database 11108755111 Z Geneseq\_23Sep04:\*
geneseqn1980s:\*
geneseqn1990s:\*
geneseqn2000s:\*
geneseqn2001as:\*
geneseqn2001bs:\*
geneseqn2002bs:\*
geneseqn2003as:\*
geneseqn2003cs:\*
geneseqn2003ds:\*
geneseqn2003ds:\* Geneseq

Pred. score and is No. is th greater t the nur than γď number number of results n or equal to the analysis of the of s predicted by chance to have a score of the result being printed, total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DВ	ID	Description
		0		ω	UΠ	Aaa30858 Ubiquitin
2	46	86.8	771	N	w	t34666 Coat pro
ω		ტ	7	N	3466	665 Coat
4		4.		N	σ	1 Capsi
<sub>5</sub>			00	N	1046	10462 Capsid p
6		4.	Ō	N	6739	q67395 Cauliflo
		4.	90	N	9954	9954
ი 8		4.	9	2	0750	z07505 Cucumbe
9		4.	37	$\vdash$	8111	
			69	N	7610	107
		4.	98	N	7610	610
		4.	17	ผ	7610	7610
			J	N	3466	34664 Coat
		1	J	ຎ	1725	17259 Coat p
			Ġ	w	5820	a
			N	<b>-</b>	9024	0249 Cucumbe
		-	42	N	7227	27
		9	Ç	N	0364	3641 Cucumbe
		7.		N	0079	00
20			N	N	8068	688 CMV-SA
		)		u	6485	6485

3 \$	RESU AAA: ID		Ω	Ω	ი	Ω	Ω	Ω				a			Ω			Ω	Ω	ი	Ω	ი	ი	a		
90544	RESULT 1 AAA30858 ID AAA308		45																						23	
л Б	358 st		15	-	_	-	-	-	-	-	-	_	-	-	-	-	-	-		-	-	-	-	-	17	-
	candard		8	<b>в</b>	8.	₿.	0	0	0	0	0.	0	0.	0	0.	0		0	0		N	۶	2		32.1	
	d; DNA;		9	9	9	9	33519	1350	1147	1147	1146	411	311	76	63	54	54	ω	ω	33446	3502	2885	113	12	657	UT
	<b>5</b>		12	12	12	12	10	ω	12	ரு	N	ص	4,	4	w	4.	4.	N	N	10	W	œ	W	ω	N	0
	вр.	ALIGNMENTS	J6585	58	9317	9317	C2470	556	899	833	294	452	934	934	557	381	39	824	281	247	489	568	547	4525	AAQ80683	174
6		X	Adj65854 GLP-2 pep	GLP-2	Novel	Adg93176 Novel exp	Adc24703 Human wil	Nuc1	•	Nucl	Aax34650 Starch br	Abk24522 EIF-2alph	Abl09344 Drosophil	Abl09345 Drosophil	Aaz45575 Nucleotid	Aai93810 Human pol	Aas43396 DNA encod	Y. I	DNF	Hun	Bordet		_	45252	80683	Aaq41742 Cucumber

AAA30 AAA30858; 858 standard; DNA; 53 BP.

Ubiqu: 19-SE itin monomer C-terminal fragment coding sequence. P-2000 (first entry)

Ubiqui ds. itin monomer; protein production; plant cell; ubiquitin promoter;

Nicot iana tabacum.

Location/Qualifiers
6. .47
/\*tag= a
/product= "Ubiquitin\_monomer\_fragment"
/partial

WO200 036129-A1.

22-JUN-2000.

11-DEC-1998; 98WO-SG000103.

11-DE( 1998 98WO-SG000103.

(MOLE -) INST MOLECULAR AGROBIOLOGY.

Fang Wu J, Chen X;

WPI; 2 2000-431604/37. B; AAY90255.

Production of desired protein in plants or plant cells by linking a ubiquitin monomer coding sequence upstream of the gene encoding the desired protein.

Claim 8; Page 18; 42pp; English.

This sequence encodes the C-terminal fragment of a ubiquitin monomer. invention relates to a method for enhancing production of a desired The

श

```
RESULT 2
AAT34666
ID AAT346
XX
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
Matches 5
                                                Coat protein (CP) genes of mosaic virus (CMV) were infected plant tissue by known CP sequences. The grash, cucumber, peppers infection. (Updated on 16)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein in a plant or plant cell by inserting a nucleic acid (NA) encoding a ubiquitin monomer upstream of a NA encoding the desired protein, where the fusion construct encodes a fusion protein and expression is not controlled by the ubiquitin promoter. The invention also relates to a NA acid vector a NA vector able to transform a plant cell, that comprises NA encoding a fusion protein having a ubiquitin monomer linked to a protein of interest and further, where expression the fusion construct is not under control of a ubiquitin promoter. The construct allows enhanced production of the desired protein in plants of plant cells
                                                                                                                             Claim
                                                                                                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                                                                                                                                                             Coat
resi
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT3
                                                                                                                                                 New isolated cucumber plants, partic. of the resistant to infection
                            Sequence
                                                                                                                                                                                             WPI; 1996-333993/33
P-PSDB; AAR98895.
                                                                                                                                                                                                                                                                                                                  11-
                                                                                                                                                                                                                                                                                                                                        WO9621018-A1
                                                                                                                                                                                                                                                                                                                                                                                                        Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-OCT-2003
02-DEC-1996
                                                                                                                                                                                                                              Boeshore
                                                                                                                                                                                                                                                                         30-DEC-1994
                                                                                                                                                                                                                                                                                             07-JUN-1995;
                                                                                                                                                                                                                                                    (ASGR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
         Match
                                                                                                                                                                                                                                                                                                                                                                                                                             prote:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                                                                                                                                                                                                                                                                             prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        999
                                                                                                                             24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                   1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
Similarity 100.0%;
53; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                    ASGROW
                                                                                                                                                                                                                             ΜĽ,
                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                      ein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                                                            Fig
                                                 mber, peppers and t
(Updated on 16-OCT-
                                                                                                                                                                                                                                                                                                                                                                                                                              \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                             ب
--
                                                                                                                                                                                                                                                                                                                                                                                                                                        CP;
                                                                                                                                                                                                                              Mcmaster
                                                                                                                                                                                                                                                    SEED
                                                                                                                                                                                                                                                                         94US-
                                                                                                                                                                                                                                                                                              95WO-US007234
                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
3. .659
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                        virus;
                                                                                                                          80pp;
                             176
                                                                                                                                                                                                                                                                                                                                                          *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                        cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P
                                                                                                                                                                                                                                                                                                                                                                                                                                                             V34
                                                                                                                                                                                                                                                    ႘
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                         003677
                            A;
        98
                                                                                                                                                            mosaic ve family
                                                                                 γd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                              y run genes may be units and tomatoes in a row 2003 to
                                                                                                                                                                                                                             JR,
                                                                                                                                                                                                                                                                                                                                                                                                        stra
                                                                                                                            English
                                                of the V27, V33, V34 and A35 strain of cucumber isolated. The CMV CP genes were isolated from PCR amplification of cDNA using primers based genes may be used for producing plants such as and tomatoes which are resistant to CMV 16-OCT-2003 to standardise OS field)
                            199
                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        771
         ထ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                            rain
                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
                                                                                                                                                                                                                                                                                                                                                                                                        ij
                            ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13
                                                                                                                                                                                                                              Tricoli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                             virus coat p
        Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 53; DB 3;
Pred. No. 6.1e-1;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٠.
        core
                                                                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Off.
                            183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                                                                                                                                                                                                                                                                                                                                                        virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             cucumber
                            ü
                                                                                                                                                                                                                             DM,
       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .<del>.</del>
                             213
       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                      CMV;
                                                                                                                                                             protein
bae or s
                                                                                                                                                                                                                              Reynolds
                            H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             mosaic
       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ب
--
      ~.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                      V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O
                            Ų,
                                                                                                                                                             Solanaceae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Other;
      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                             JF,
                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        V33;
                             Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ĊΠ
                                                                                                                                                                                                                              Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                        V34;
                                                                                                                                                             whi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                         A35
                                                                                                                                                             produce
ich are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ទូ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ទ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

RESULT 4
AAQ10461
ID AAC
XX
AC AAC
XX

AAQ1

Ö

standard;

CDNA;

976

ВP

4

AAQ10

461;

```
RESULT 3
AAT34665
ID AAT346
XX Coat I
XX Coat I
XX Coat I
XX Coat I
XX Cucuml
XX Cucuml
XX PH Key
FT CDS
CC Coat
CC
   밁
                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-007
02-DEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boeshore ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-JUN-1995;
                                                                                                                          Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Loca
                                                                                                                                                    Match
                                                                                                                                                                                                                                            protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based on CP sequences. The genes may be used for producing plants such as cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T-2003
C-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            665;
                                                                                                                              <u>a</u>1
                                                                                                                                                                                                    nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        solated cucumber mosaic virus coat proteins, partic. of the family Cucurbitaceae or stant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1996-333993/33.
B; AAR98894.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein; CP; cucumber mosaic virus; CMV;
tance; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -) ASGROW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1018-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ber mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           665 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                       13; Fig 2; 80pp; English.
                                                                                                   46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                             1 86.8%; Score 46; DB 2; Length 773;
Similarity 100.0%; Pred. No. 3.4e-15;
16; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 100.0%; l6; Conservative
                                                                                                                                                                                               773 BP; 175 A; 200 C; 185 G; 213 T;
CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of the V33 strain of cucumber mosaic virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mcmaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94US-00367789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95WO-US007234.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
3. .659
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           773 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tricoli DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 3.4e-15;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              V33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Reynolds JF,
                                                                                                                                                                                                   0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA - used Solanaceae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 which are
                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                      0
```

O

```
RESULT 5
AAQ10462
ID AAQ10
XX
AC AAQ10
XX
DT 27-AU
DT 25-MA
DT 16-AE
XX
DE Capsi
XX
KW CMV;
XX
OS Cucum
                                                                                                                                                                                                  PFFFXSXSXFFFFXSXFXFXFXFXFXFXFXSXSSSSSXFXFFFFXSX
                                                                                                                                     밁
                                                                                                                                                    ঠ
                                                                                                                                                                    Ma Be
                                                                                                                                                                                                          cultured as shoots ir resistant to CMV. See PA field.) (Updated o AUG-2003 to compared o
                                                                                                                                                                           ery
et 1
                                                                                                                                                                     CT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-AUG-2003
25-MAR-2003
16-APR-1991
                                              27-AUG-2003
25-MAR-2003
16-APR-1991
                                                                                                                                                                                                                                                                                                                                                      WPI; 199
P-PSDB;
                                                                                                                                                                                                               The gene was isolated from a plasmid (pUC18) containing DNA complement to RNA 3 of the virulent strain FNY, isolated in New York on infected melons. The sequence includes a leader sequence, coding region and 3'-coding region. The leader sequence is the same length as that of the Japanese Y strain of CMV. Transgenic melon plantlets containing the sequence introduced via an Agrobacterium tumefaciens intermediate are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10462. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.)
                                                                                                                                                                                                                                                                                                                       culture or resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CMV;
                               Capsi
                                                                             AAQ10462;
                                                                                                                                                                     ches
                                                                                                                                                                                                                                                                                                                                                                              Debo
                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Capsid
                                                                                                                                                                                                                                                                                                        Claim 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            EP412912-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cucumber
  Cucumber
                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                      Transgenic
                                                                                                                                                                                                                                                                                                                                                                                             (BIOC-)
                                                                                                                                                                           Match
Local (
                                                                                                                                                                                                                                                                                                                                                                                                                           -AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                              AUG-1989
                                                                                              04
                                                                                                                                                                                                                                                                                                                                                      1991-046027/07
DB; AAR10652.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resistance;
                                 Ω
                resistance;
                                                                                              62
                               prot
                                                                                                                                                                                                                                                                                                                                                                                                                                             1991
                                                                                                                                                                h 84.9%;
Similarity 100.0%
45; Conservative
                                                                                                                                                                                                                                                                                                                                                                              Σ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                     4
                                                                                                                                                    IJ
                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                              BIOCEM
                                                                                                                                    CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mosaic
                                                                                                                                                                                                   976
  mosaic
                                                                                              standard;
                                                                                                                                                                                                                                                                                                        Page
                                                                                                                                                                                                                                                                                                                       melon plantlets pospecific medium for cucumber mosaic
                                \mathbf{o}
                                                                                                                                                                                                                                                                                                                                                                              Bentahar
                                בֹּן
                                               (revised)
(revised)
(first en
                                                                                                                                                                                                   ₿P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
(revised)
(first en
                                                                                                                                                                                                                                                                                                        17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                              SA
                                                                                                                                                                                                                                                                                                                                                                                                                             90EP-
                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/C
75. .731
/*tag= a
/product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Airus
  virus
                                                                                                                                                                                                                                                                                                                                                                                                              ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 capsid
                                                                                                                                                                                                   224
                                                                                                                                                                                                                                                                                                                                                                                                              FR
               capsid
                                                                                                                                                                                                                                                                                                       44pp;
                                                                                              DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                õŧ
                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                             00402282
                                                                                                                                                                                                                                                                                                                                                                              Ŝ
                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tion/Quali
                                                                                                                                                                                                   Ŋ,
                                                                                                                                                                                                                                                                                                                                                                                                              001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cucumber
                                Cucumber
                                                                                              1007
                                                                                                                                                                                                                                                                                                                                                                             Noel
                protein;
                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                        French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "CMV
                                                                                                                                                                                                                                                                                                                       prodn. f for new ic virus.
                                                                                                                                                                   0
                                                                                                                                                                                                   Ç
                                                                                                                                                                  Score 45;
Pred. No.
0; Mismatc
                                                                                              ВÞ
                                                                                                                                                                                                                                                                                                                                                                             Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strai
                                                                                                                                                                                                   230
                                 ₹
o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cucumis
                 Cucumis
                                                                                                                                                                                                                                                                                                                                                                              Perre
                                                                                                                                                         45;
No. 1.
                                                                                                                                                                                                                                                                                                                              from transformed shoots -
transformed plants etc.,
                                                                                                                                                                                                  Ç
                                ai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Þ
                                O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YNA
                                                                                                                                                                                                   273
                                                                                                                                                                                                                                                                                                                                                                              ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Virus
                                 ۲۷
                                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  melo;
                 melo;
                                Bnr
                                                                                                                                                                                                  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          capsid
                                                                                                                                                                            2e
                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 strain
                                8t
                                                                                                                                                                                                   0
                                                                                                                                                                    40
                                                                                                                                                                                                  Ų;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                rain
                                                                                                                                                                                  Length
                 œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                  0
                                                                                                                                                                   Indels
                                                                                                                                                                                                  Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FNY
                                                                                                                                                                                   976
                                                                                                                                                                                                                                                                 DNA complementary ork on infected region and 3' non as that of the
                                                                                                                                                     49
                                                                                                                                                                                                                                                                                                                               esp
                                                                                                                                                                                                                                                                                                                                        λq
                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                      two=
                                                                                                                                                                    Ga
                                                                                                                                                                   ෂ්ඨු
                                                                                                                                                                                                                           on 27
                                                                                                                                                                                                                                                                                                                                       stage
                                                                                                                                                                   0
```

×.

FR270

1960-A1.

```
RESULT 6
AAQ67399
ID AA(
XX
AC AA(
XX
AC AA(
XX
DT 25
DT 12
XX
Can
XX
CAN
XX
CAN
XX
FH Ke
FT CD
FT
XX
FR
                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                  Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                           specia
also I
25-MAI
field.
                                                                                                                                                                                         T 6
7395
AAQ6
                                                                                                                                                                                                                                                                                                                                                                                                      The geplant!
post-i
was sy
by sta
the ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI
                                                                                                                                        25-MAI
12-API
                                                                                                                                                                                                                                                                                                                                                                                  sequer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Transc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Debot)
                                                                     Caul
                                                                                       polyr
                                                                                                 Cauli
                                                                                                                      Cauli
                                                                                                                                                                      AAQ67
                                                                                                                                                                                                                                                                                                                         Seque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EP412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                        Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               resis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-AUG-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                         e gene was isolated from the virulent French strain 117F of CMV. Tomat(antlets at the 2-leaf stage were infected with CMV strain 117F. 15 day; st-infection, the virus was purified from the infected leaves and cDNA synthesised from RNAs 1,2,3 and 4. After purification and selection standard techniques, cDNA complementary to RNA 4 was found to encode capsid protein. It was recloned into "Blue scribe" plasmids and quenced. Transgenic melon plantlets containing the sequence introduced an Agrobacterium tumefaciens intermediate are cultured as shoots in cial media. The transformed melon plants are resistant to CMV. See AAQ10461. (Updated on 25-MAR-2003 to correct PA field.) (Updated on .MAR-2003 to correct PI field.) (Updated on 27-AUG-2003 to correct OS)
                                                                                                                                                                                                                                                                                                     Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUG-1990;
                                                                     μ.
                                                                                                                                                                                                                                                                                            Õ
                                                                                                                                                                                           J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       U
                                                                                                                                         R-2003
R-1995
                                                                                                                                                                       395;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  r
K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     912-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genic melon plantlets prodn. from transformed shoots - re on specific medium for new transformed plants etc., tant to cucumber mosaic virus.
                                                                     flower
                                                                                                                                                                                           395
                                                                                                                                                                                                                                                                                                                          nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B-1991
                                                                                         ibozyme;
                                                                                                  flower mosaic
                                                                                                                       flower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1991-046027/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -) BIOCEM SA.
                                                                                                                                                                                                                                            ទ
                                                                                                                                                                                                                                                                                   45;
                                                                                                                                                                                                                                                               տ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR10653.
                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                         1007 BP; 227 A;
                                                                                                                                                                                                                                          CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bentahar
                                                                     mosaic virus
                                                                                                                      mosaic
                                                                                                                                                                                                                                                                                 84.9%; Score 45; llarity 100.0%; Pred. No. Conservative 0; Mismatc
                                                                                                                                         (revised)
(first en
                                                                                         inactivate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89FR-00010848.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90EP-00402282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
54. .710
/*tag= a
                            Location/Qualifiers
54. .710
/*tag= a
                     /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44pp; French.
                                                                                                  virus;
                                                                                                                                                                                          DNA; 1007
                                                                                                                     virus capsid protein coding sequence
                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Noe1
                                                                                                                                                                                                                                                                                                                          259 C; 247 G; 274 T;
                                                                                         CMV; capsid protein; coat inactivation; resistance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "CMV strain 117F
                     "Capsid protein."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Σ,
                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perret
                                                                                                                                                                                                                                                                                            DB 2; Le
1.2e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ij.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        capsid
                                                                                                                                                                                                                                                                                                                          0 U; 0 Other;
                                                                                                                                                                                                                                                                                                     Length 1007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein"
                                                                                                                                                                                                                                                                                    Indels
                                                                                         protein;
crop protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        esp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   by two=stage
                                                                                                                                                                                                                                                                                   ?
                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tomato
                                                                                           88
```

<u>.</u>

```
PEX PXX PATE FITTER XXX C 22 P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rne RNA encoding the targetted by a nuclei polyribozyme has endo gene encoding the vir several catalytic regresistance to virus. PN field.)
                                                                                                                                                                                                                                                                                                                                                                                       T 7
3545/0
AAT9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI;
                                                                                                                                                                                                                                                                            Tran
                                                       ĦΡ
                                                                                                                                                                                                       Xey
                                                                                                                                                                                                                                                                   coa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of new v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lene
        07
                                                                                                                                          819
                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                  AAT99545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GENE
                                12-NOV-1997
                                                                                                       promoter
                                                                                                                                                                                                                                           Cucumber
                                                                                                                                                                                                                                                                                                       Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                              25-MAR-2003
21-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Loca.
                                                                                                                                                                                                        UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mat
                                                        06481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEB-
                                                                                                                                                                                                                                                                                                                                                                                          99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEP-1994
                                                                                                                                          _peptide
                                                                                                                                                                                                                                                                 egeni
prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polyribozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1994-
                                                                                                                                                                                                                                                                                                                                                                                          545
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (J)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <del>C</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ũ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . Similarity 45; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4-281767/3
AAR57968.
                                                                                                                                                                                                                                           mogai
                                                                                                                                                                                                                                                                                                       mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽2
                                                                                                                                                                                                                                                                 c plant; viruein; antisens
                                                                                                                                                                                                                                                                                                                                                                                          \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    007
                                                                                                                                                                                                                                                                                                                                                                                         tandard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  zyme contg.
an inactiva
resistant
                                                            a

/*tag= b

/product= "c

956. .1029

/*tag= c

/note= "coat l

1030. .1066

/*tag= d

/note= "-
                                                                                                                                                                                                                                                                                                                              (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHEARS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   вP;
                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ng the capsid protein of cauliflower mosaic virus can led acid sequence called a "polyribozyme". The se endoribonuclease activity and is able to inactivate the viral capsid protein. The polyribozyme comprises tic regions derived from ribozymes and confers complete virus. See AAQ67391-94. (Updated on 25-MAR-2003 to corr
        φ
                                                                                                                                                       1.
/*tag=
300. .9
/*tag=
'~dur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93FR-00002269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2)
7:
        7EP-
                                                                                                                                                                                                                 Locat
                                                                                                                                                                                                                                           virus
                                                                                                                                                                                                                                                                                                      virue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3FR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rvat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   227
                                                                                                                                                                                                                                                                              virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ហ
                                                                                                                                                                                                                                                                                                                                                                                          cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67pp;
                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YTG
                                                                                                                                                                                                                                                                                                                             entry)
        002013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       00002269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gruber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84.9%;
100.0%;
cive (
                                                                                                                                                                                                                 ion,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , do
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g. several (
vate gene fo
t transgenio
                                                                                                                                                                                                                                                                                                       RNA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ?
                                                                                                                                                                                                                                                                   ው
                                                                                                                                                                                                                                                                 resista
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LID
                                                                                                                                                                                                                  'Quali
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             French.
        79
                                                                               seguen
                                                                                                                                                                                                                                                                                                       w
                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                       coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ζ,
                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                          Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                  pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ••
                                                                                                                                                                                                                   m
                                                                                                                                                                                                                                                                                                                                                                                          田
                                                                                                                                                                                                                                                                              ance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l catalytic for viral caic plants,
                                                                                                                                                                                                                   10
                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baudot
                                                                                                                                                     prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ced. No Mismat
                                                                                ក្ល
                                                                                                                   tein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    247
                                                                                                                                                                                                                                                                                                       H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ርጉ ው
                                                                                                                                                                                                                                                                                                       ra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45;
                                                                                0
                                                                                                                                                                                                                                                                                                     gment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ູດ
                                                                                m
                                                                                                                                                                                                                                                                               disea
                                                                                                                                                       in"
                                                                                                                   leader
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
1.
ches
                                                                                gub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  c regions
capsid pr
, also DNA
                                                                               ۳
                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        011ivo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   년.
                                                                                enomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                   \omega
                                                                                                                                                                                                                                                                               re
                                                                                                                  equenc
                                                                                                                                                                                                                                                                              sistance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                               'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ų;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in
                                                                               promot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                     Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complementary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
                                                                                                                                                                                                                                                                                                                                                                                                                                                       97
                                                                                                                                                                                                                                                                               RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                евр.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  p. for pre
encoding
                                                                                                                                                                                                                                                                               virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              prepn
                                                                                                                                                                                                                                                                               CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aq,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            he
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
AAZO
                                                         RE
                                                                                                   밁
                                                                                                                            S
                                                                                                                                                         Query N
Best Lo
Matcher
                                                         S
                                          ULT 8
                           7505/c
AAZ07!
AAZ07
                                                                                                                                                                                                              Seque
                                                                                                                                                                                                                                                                      have tresist withir antise
                                                                                                                                                                                                                                                                                                                                           (see a contained relation plant functifunct)
                                                                                                                                                                                                                                          ant
of 1
                                                                                                                                                                                                                                                                                                                                                                                                                                the su
sequer
by amp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prepa
anti:
from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cell:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (META
                                                                                                                                                                       LO.
                                                                                                                                                                                                                                       his cDNA clone of cucumber mosaic virus (CMV) RNA-3 includes domain F of he subgenomic promoter of viral RNA, the coat protein gene, its leader equence, and the tRNA-like 3'-terminal region of RNA-3. It was prepared y amplifying a fragment of CMV cDNA-3 from clone pCR-CMVIRNA3 by PCR see also AAT99548-49). The gene construct is introduced into a vector ontaining a promoter active in plant cells in antisense orientation elative to the promoter. A claimed recombinant vector comprises the lant promoter, the antisense gene construct and a terminator which is unctional in the plant. In addition to CMV, viral RNA may also be used rom tobacco mosaic virus and potato virus. Claimed transgenic plants ave the antisense gene construct integrated into their genomes. They are esistant to viral infection. In particular, they are resistant to CMV. ithin the antisense gene construct, the interfering activity of the ntisense f domain of the sub-genomic promoter, associated with the ntisense activity performed by the coat protein gene, allows production f plants having 100% resistance to CMV. (Updated on 25-MAR-2003 to
                                                                                                                                                                                                                                          pla
                                                                                                                                                                                    Ma
                                                                                                                                                           8
                                                                                                                                                                        Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ring transgenic plants resistant to RNA virus infection - using sense gene constructs containing the viral coat protein gene, cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ni F,
  505;
                             505 standard; cDNA; 1067 BP.
                                                                                                                                                                       a1
                                                                                                                                                                                      tch
                                                                                                                                                                                                                 nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1997-538620/50.

    -) METAPONTUM AGROBIOS SCRL.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y-1996;
                                                                                                                               ហ
                                                                                                                                                           45;
                                                                                                                                                         1 84.9%; Score 45; DB 2; L
Similarity 100.0%; Pred. No. 1.2e-14;
15; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page
                                                                                                                                                                                                              1066 BP; 299 A; 251 C; 273 G; 243 T; 0 U; 0 Other;
                                                                                                 Grieco PD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10; 18pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96IT-MI000927.
                                                                                                                                                                                   Length 1066;
                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              using
ene, e.g.
                                                                                                                                                           <u>.</u>
```

```
28-SE
                                                                                                               Transo
      WPI;
                   Cell
                                                                                      SSD
                                                                                                                                                  26-NO
                                 (META
                                              09-MA
                                                            09-MA
                                                                                                    Cucumber mosaic
                                                                                                                                    Cucumi
                                                                                      95
                   ni F,
                                                                                                                genic plant; RNA virus; antisense construct; cucumber mosaic promoter; coat protein gene; infection; RNA-3; ss.
      1997-538620/50.
                                                            Y-1997;
                                                                                      9181-A.
                                                                                                                                                  V-1999
                                                                         2-1999.
                                                                                                                                    oer mosaic virus (CMV) RNA-3 gene cDNA clone fragment
                                  METAPONTUM AGROBIOS SCRL.
                    Grieco
                                                                                                                                                 (first entry)
                                                            97US-00854170.
                                               96IT-MI000927.
                                                                                                    ATLUS
                   PD;
```

virus;

ay in the second

```
AAN81111
ID 27.7.4 Δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query N
Best Lo
Matcher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Preparing anti:sense from cucum
                                                        WPI; 198
P-PSDB;
                                                                                                                                       20-FEB-1987;
25-FEB-1987;
18-FEB-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to preparing transgenic plants resistant to RNA virus induced infections that comprises integrating an antisense gene construct into the plant genome. The construct comprises: (a) an F domain of a subgenomic promoter of cucumber mosaic virus (CMV); (b) downstream from the leader sequence of a coat protein gene of CMV; (c) downstream from the leader sequence, a gene encoding a CMV coat protein; and (d) downstream from the gene, a 3'-terminal region of a CMV coat protein gene. The method is useful for producing plants which are resistant to infection by RNA based viruses. The gene construct gives higher levels of resistance compared to antisense constructs which are capable of complementing with different domains of genomic RNA of CMV. The present sequence represents the fragment of cDNA clone of RNA-3 of CMV. This forms the antisense construct of the invention
                                                                                                                                                                                                                                                                                Key
CDS
 Dis
                       DNA
                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
12-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                        AAN81111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                   EP279433-A
                                                                                                                                                                                                                                                                                                                                          Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                AAN81111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                 (TAKE
                                                                                           Furusawa
                                                                                                                                                                                      18-FEB-1988
                                                                                                                                                                                                             24-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
 closur
                     coding for producing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : sense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sense gene
cucumber m
                                                                    1988-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                  <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 45; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U
                                                                                                                 TAKEDA
                                                         8-236708/34
AAP80509.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1067
                                                                                          Ħ,
                                                                                                                                                                                                                                                                                                                                          mosaic
                                                                                                                                                                                                                                                                                                                                                               contg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transgenic plants resistant gene constructs containing ber mosaic virus.
                                 for
Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
(first en
                                                                                           Onda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B₽;
                     plants
                                                                                                                                       87JP-00038288.
87JP-00043443.
88JP-00035809.
                                   the
                                                                                                                 CHEM
                                                                                                                                                                                                                                                          Location/Qualif
418. .1074
/*tag= a
/label= cucumha
                                                                                                                                                                                      88EP-00102322
                                                                                                                                                                                                                                                                                                                                                                SMO
CMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15pp;
                                                                                                                                                                                                                                                                                                                                        virus;
...
∵
                                                                                                                                                                                                                                                         label=
                                                                                          Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   297
                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA;
                                 coat
                                                                                                                  IND
                                                                                                                                                                                                                                                                                                                                                                 strain
                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84.9%;
100.0%;
tive (
; ddo
                       resistant (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         English.
                                                                                          Komiya
                                                                                                                                                                                                                                                                                                                                       plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                1379
                                                                                                                  LTD.
                                                                                                                                                                                                                                                         cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250
English
                                                                                                                                                                                                                                                                                                                                                                 К
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç
                                                                                           H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                          viral
                                                                                                                                                                                                                                                                                                                                                                 coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 45; DE Pred. No. 1.; Mismatches
                                                                                                                                                                                                                                                                                            fj
                        ď
                                 0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    276
                                                                                                                                                                                                                                                        mosaic
                       cucumber m
                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45;
No.
                                                                                                                                                                                                                                                                                                                                          resistance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244
                                                                                                                                                                                                                                                         virus-Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.
BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RNA virus infection e viral coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 2;
.2e-14;
0;
                                                                                                                                                                                                                                                                                                                                                               gene
                       r mosaic v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                        coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  u;
                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indel
                        virus
                                 virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       α
                       s strain Y infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        using
ene, e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                 ĸ
                                 used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

멍

श

sense invadi tobacc

ing virus,

in dia spi

RNA

```
RESULT 10
AAQ76107
ID AAQ76
XX
88888888%&
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Mat
Best Loca
Matches
                                    prote
                                                                                                                                                                                                                                                                                                                                                                              hypersensitive response;
Lycopersicon esculentum;
cell inhibitory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This DNA is produced on screening of a plasmid library and is used to transform plant cells which subsequently produce the coat prot- ein of cucumber mosaic virus (CMV) strain Y. This protein is not synthesised in natural plant cells. The resistance to CMV infect- ion, provided by the DNA, is shown in plant cells and redifferent- iated plant bodies. See also AAN81110. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PR field.)
                                                                                               DNA co
encode
elicit
                                                                                                                                       WPI; 1
P-PSDI
                                                                                                                                                                                                                                                                                                                                                                                                                      Cucumb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAQ76
                                                                                                                                                                                                                                                                                                                               Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAQ76
                                                                             Claim
                                                                                                                                                                    De
                                                                                                                                                                                      (SANO
(SANO
(SANO
                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                         A chimeric
                                                                                                                                                                                                                                                                      22-DE
                                                                                                                                                                                                                                                                                         W0942
                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucumi
                                                                                                                                                                                                                              04-JUI
                                                                                                                                                                                                                                                 03-JUN-1994;
                                                                                                                                                                                                                                                                                                                                                              Cucum
                                                                                                                                                                    Haan PT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                      b e
                                    in gene
aving th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107;
                                                                                                ting
                                                                                                                                                                                                                                                                                                                                                                                                                        ber
                                                                                                                                                                                                                                                                                                                                                                                                                                           ber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                107
                                                                                                         onstructs for imparting pathogen, esp. es RNA that interacts with viral RNA p
                                                                                                                                                                                                                             N-1993;
                                                                                                                                                                                                                                                                                                                                                              ber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 417
                                                                                                                                                                                                                                                                                          9464-A1
                                                                                                                                                 995-036490/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   U
                                                                                                                                                                                       SANDOZ I
SANDOZ I
SANDOZ-I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.9%;
Similarity 100.0%;
15; Conservative
                                                                                                                                        AAR67754.
                                                                            Page
                                                                                                                                                                                                                                                                                                                                                                                                                                            mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGGACAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                              mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                       mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1379 BP; 306
      c cucumber mosaic virus RNA-3 (given in AAQ76107) has the coat ene replaced by a gene encoding a cell inhibitory protein, RNase the sequence given in AAR67754. The construct elicits a minusthat interacts with the RNA-dependent RNA-polymerase of an virus, thus conferring virus-resistance on a host plant, e.g. comato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                               agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first en
                                                                            31-32;
                                                                                                                                                                                                            LTD.
                                                                                                                                                                                       PATENT GMBH
ERFINDUNGEN
                                                                                                                                                                                                                                                  94WO-EP001817.
                                                                                                                                                                                                                                                                                                                                                                                                             virus; tor
e; disease
                                                                                                                                                                                                                                                                                                                                                              virus
                                                                                                                                                                                                                                                                                                                      123. .4
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                            virus RNA-3 chimera
                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                            /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA; 1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                           50pp;
                                                                                                                                                                                                                                                                                                                                .437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                         tomato mosaic virus; minus-strand RNA; ase resistance; transgenic plant; cross e; crop improvement; tomato; n; tobacco; Nicotiana tabacum; RNase T1;
                                                                                                                                                                                                                                                                                                                                                                                 TOMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              342
                                                                                                                                                                                        VERW
                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     o
;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 45;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; 333
                                                                                                                                                                                                                                                                                                                                                                                 CMV;
                                                                                                                                                                                        GES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>G</u>
                                                                                                                                                                                                                                                                                                                                                                                  88.
                                                                                                                                                                                                                                                                                                                                                                                                                                            encoding RNase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
1.2e-14;
- 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              398
                                                                                                         polymerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ţ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ų;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                             Τ1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                    resistance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Other;
                                                                                                           ç
                                                                                                          generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                               protection;
                                                                                                           plant:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>0</u>
```

 $\omega = (\omega^{-1} \varphi_{i(0,j)}) = (\gamma^{-1} \varphi_{i(0,j)})$ 

**B** 

```
RESULT 11
AAQ76106
ID AAQ76106
XX
AC AAQ76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SS
Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Ma
Best Loc
Matches
                                                                                        A chimeric cucuml coat protein (CP) (AAR67753). The (RNA-dependent RNA resistance on a l to correct PN fie
                                                                                                                                                                                                               DNA constructs for encodes RNA that eliciting agent.
                                                                                                                                                                                                                                                                                                                                      (SANO
(SANO
(SANO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9429464-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cucumber mosaic virus; tomato mosaic virus; minus-strand virus resistance; disease resistance; transgenic plant; chypersensitive response; crop improvement; tomato; Lycopersicon esculentum; tobacco; Nicotiana tabacum; coat ToMV; CMV; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAQ76106
                                                                  Sequence
                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                            04-JUN-1
                                                                                                                                                                                                                                                                                                                                                                                                                     03-JUN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ76106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                             Haan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mat
                                       Match
                                                                                                                                                                                                                                                                    ; 1995-0364
SDB; AAR677
                                                                                                                                                                                                                                                                                                                                                                                                                                                -
回
回
                                                                                                                                                                                      u
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ch
                                                                                                                                                                                                                                                                                                                                                                                                                    -1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 45; Conservat
                                                                                                                                                                                                                                                                                                                                      SANDOZ I
SANDOZ I
SANDOZ-I
                                                                                                                                                                                                                                                                                                            PT;
                          S
                                                                                                                                                                                                                                                                                                                                                                                            993
                                                                                                                                                                                                                                                                                                                                                                                                                                                Θ
                                                                  1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mosaic
                                                                                                                                                                                       Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mosaic
                           imi
                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                              cucumber mosaic
n (CP) of tomato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
               Cons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       တ
            larity
Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
(first entry)
                                                                                        cumber mosaic virus RNA-3 (given in AAQ76106) codes for the (CP) of tomato mosaic virus (AAR67752) as well as its own CP ne construct elicits minus-sense RNA that interacts with the RNA-polymerase of an invading virus, thus conferring virus a host plant, e.g. tobacco, tomato. (Updated on 25-MAR-2003 field.)
                                                                BP;
                                                                                                                                                                                       27-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B₽;
                                                                                                                                                                                                                                                                    90/05.
52, AAR67753
                                                                                                                                                                                                                                                                                                                                      LTD.
PATENT GMBH.
-ERFINDUNGEN
                                                                                                                                                                                                                              for imparting tinteracts
                                                                                                                                                                                                                                                                                                                                                                                                                    94WO-EP001817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifie
123. .600
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product= "
895. .1550
/*tag= b
/product= "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  virus
                                                                                                                                                                                                                                                                                                                                                                                            3GB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          virus
               rvat
                                                                  44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                  \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                            0
             84.9
100.
ive
                                                                                                                                                                                      50pp;
                                                                                                                                                                                                                                                                                                                                                                                            11000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84.
100
                                                                 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34.9%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RNA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ŋ,
                          .9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1860
                                                                                                                                                                                                                             ing pat
                                                                  429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       413
                                                                                                                                                                                                                                                                                                                                        VERW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOMV
                                                                                                                                                                                      English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chimera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 45;
Pred. No.
0; Mismatch
                                       S
                                                                 ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                          Score
Pred
                                                                                                                                                                                                                               thogen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   coat
                                                                                                                                                                                                                                                                                                                                        GES
                                                                 431
             Mismat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oat
                                       4
                                                                                                                                                                                                                                                                                                                                        MBH
                          No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ن</u>
                                                                 Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prote
                                                                                                                                                                                                                           esp. virus, resis
             ches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ches
                                                                  ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       507
                          1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.
                                                                 Ū
                                                                 N
                          2;
2e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2e
                                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₩.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  )-14
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOMV
            4.0
                           4
                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                       Len
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                 Ġ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ç;
                                      ıgth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CP
             Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indel
                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 coat
                                                                Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Other;
                                       18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ö
                                                                                                                                                                                                                           stance to
generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RNA;
                                         σ
                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein;
            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prot
            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                               plant an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CP;
             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
RESULT 12
AAQ76108
ID AAQ761
XX
Cucumb
Cucumb
XX
Cucumb
  뮍
                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                     Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-JUN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-JUN-1994;
                                                                                                                                                                                                                      chimeric cucumber mosaic virus RNA-3 (given in AAQ76108) has the coat rotein gene replaced by a gene encoding an elicitor, ToMV P30, having he sequence given in AAR67755. The construct elicits a minus-sense RNA hat interacts with the RNA-dependent RNA-polymerase of an invading irus, thus conferring virus-resistance on a host plant, e.g. tobacco, omato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                    Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Haan PT;
  209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ber mosaic virus; tomato mosaic virus; minus-strand RNA;
resistance; disease resistance; transgenic plant; cross
sensitive response; crop improvement; tomato;
ersicon esculentum; tobacco; Nicotiana tabacum; P3O; eli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108;
                                                                                                               a 1
                                                                                                                                    Ch
                                                                                                                                                                                nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1995-036490/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9464-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                nstructs for imparting pathogen, esp. virus, resistance to s RNA that interacts with viral RNA polymerase to generate
                                                                                        45;
                                            ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SANDOZ I
SANDOZ I
SANDOZ-I
                                                                                     n 84.9%;
Similarity 100.0%;
45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR67755.
2173 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mosaic
                                                                                                                                                                                                                                                                                                                                                                                 Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                   34-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LTD.
PATENT GMBH.
-ERFINDUNGEN V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94WO-EP001817.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93GB-00011593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
123. .914
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           virus RNA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product=
                                                                                                                                                                               561 A; 438 C; 532 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA;
                                                                                                                                                                                                                                                                                                                                                                            50pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "ToMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERW
                                                                                     ; Score 45; DB . 
%; Pred. No. 1.1. 
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chimera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 elicitor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          encoding
                                                                                                                                                                            642 T; 0 U; 0 Other;
                                                                                                          DB 2; Le
1.1e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOMV P30.
                                                                                         .
•
                                                                                                                                 Length 2173
                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cross
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               elicitor;
                                                                                        <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protection;
                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     plants
an
                                                                                         0;
```

RESULT 3

4.7

entrance of the second

```
RESULT 14
AAT17259
ID AAT17
XX
AC AAT17
XX
DT 16-OC
DT 02-DE
XX
DE Coat
XX
Coat
KW Coat
KW resig
XX
OS Cucun
XX
                                                                                                                                                             멍
                                                                                                                        S
                                                                                                                                     Query Match
Best Local S
Matches 43
                                                                                                                                                                       Coat protein (CP) genes of mosaic virus (CMV) were is infected plant tissue by P known CP sequences. The ge quash, cucumber, peppers a infection. (Updated on 16-
                                                16-OCT-2003
02-DEC-1996
                                                                                                                                                                                                                                                       WPI; 199
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                        Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                         Coat
                                                                                                                                                                                                                                           New
                                                                                                                                                                                                                                                                                                                                                                                                                     16-OCT-2003
02-DEC-1996
                  Coat I
                                                                  AAT17259;
                                                                               AAT17259
                                                                                                                                                             Sequence
                                                                                                                                                                                                                               plants, partic. of the resistant to infection.
                                                                                                                                                                                                                                                                                                                          11-JUL-1996
                                                                                                                                                                                                                                                                                                                                       WO9621018-A1
                                                                                                                                                                                                                                                                                                                                                                           Cucumber
                                                                                                                                                                                                                                                                                                                                                                                      Coat protein; resistance; s
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT34664;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAT34664
                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                  30-DEC-1994;
                                                                                                                                                                                                                                                                         Boeshore
                                                                                                                                                                                                                                                                                                              07-JUN-1995
      Cucumber
                                                                                                                                                                                                                                                                                      (ASGR-)
                                                                                                                                                                                                                                           isolated
                                    protein
                                                                                                                                                                                                                                                       1996-333993/33.
)B; AAR98893.
                                                                                                                                                                                                                                                                                                                                                                                                        protein
                   מיה
                                                                                                                                                                                                                   <u>ب</u>
                  ance;
                        rotein;
                                                                                                                                    h 81.1%;
Similarity 100.0%;
43; Conservative
                                                                                                                         4
                                                                                                                                                                                                                                                                                      ASGROW
                                                                                                                                                                                                                   Fig
                                                                                                                                                                                                                                                                          Ĭ,
      mosaic
                                                                                                             mosaic
                                                                                                                                                             772
                                                                               \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                               tandard;
                                                                                                                                                                                                                                                                                                                                                                                       88
                   Ø
                                                                                                                                                                                                                                     cucumber ic. of the
                                                                                                                                                                                                                   1;
                                     of.
                                               (revised)
(first en
                                                                                                                                                            BP;
                                                                                                                                                                                                                                                                                                                                                                                                         of
f
                                                                                                                                                                                                                                                                                                                                                                                                                     (revised)
(first en
                   8
                                                                                                                                                                                                                                                                                                                                                                                            CP;
                        CP;
                                                                                                                                                                                                                                                                         Mcmaster
                                                                                                                                                                                                                                                                                      SEED
                                                                                                                                                                                                                                                                                                  94US-00367789
                                                                                                                                                                                                                                                                                                              95WO-US007234
                                                                                                                                                                                                                   80pp;
                                     the
                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                 Location/Qualifie
3. .659
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                           virus;
      virus;
                                                                                                                                                             177
                                                                                                                                                                                                                                                                                                                                                                                             cucumber
                        cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA;
                                                                               DNA;
                                                                                                                                                                                                                                                                                                                                                                                                         V27
                                     A35
                                                 ent
                                                                                                                                                                                                                                                                                      ၀
                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                             A.
                                                                                                                                                                                                                                     mosaic ve family
                                                                                                                                                                                                                  English.
                                                                                                                                                                        s of the V27, V33, V34 and A35 strain of cucumber isolated. The CMV CP genes were isolated from by PCR amplification of cDNA using primers based genes may be used for producing plants such as and tomatoes which are resistant to CMV 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                          JR,
                                                                                                                                                                                                                                                                                                                                                                           strain
      strain
                                                3
                                     strain
                                                                               772
                                                                                                                                                             202
                                                                                                                                                                                                                                                                                                                                                                                                         38
                                                                                                                                                                                                                                                                                                                                                                                                                                                    77
                                                                                                                                                                                                                                                                                                                                                                                                         rain
                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                         e
o
                                                                                                                                                                                                                                                                                                                                                                                             mosaic
                                                                                                                                                            <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                               ₫B
                                                                                                                                      0
                                                                                                                                                                                                                                                                          Tricoli
                                                                                                                                    Score 43; DB 2;
Pred. No. 1.5e-1
); Mismatches
                                                                                                                                                                                                                                      virus coat protein
                         saic
                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                         0
f
                                     0f
                                                                                                                                                                                                                                                                                                                                                                                             virus;
                                                                                                                                                                                                                                                                                                                                                                                                         cucumber
                                     cucumber
                                                                                                                                                            <u>ი</u>
                                                                                                                                                                                                                                                                          묫
                        8
                                                                                                                                                              211
                                                                                                                                                                                                                                                                                                                                                                                             CMV;
                        CMV;
                                                                                                                                                                                                                                                                          Reynolds
                                                                                                                                                            ;;
                                     mosaic
                                                                                                                                                                                                                                                                                                                                                                                                         mosaic
                                                                                                                                                              O
                                                                                                                                                                                                                                                                                                                                                                                             V27;
                        V27;
                                                                                                                                      oω
                                                                                                                                                            Ų;
                                                                                                                                                Length
                                                                                                                                                                                                                                     DNA - used Solanaceae,
                                                                                                                                                                                                                                                                          JF,
                                     virus
                                                                                                                                                             0
                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                            V33;
                        V33;
                                                                                                                                                             Other;
                                                                                                                         46
                                                                                                             43
                                                                                                                                                 772;
                                                                                                                                                                                                                                                                          Carney
                                                                                                                                                                                                                                                                                                                                                                                             V34;
                        V34;
                                                                                                                                                                                                                                     to produce which are
                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                             A35;
                         A35
                                                                                                                                                                                                                                                                          3
                                                                                                                                    Gaps
                                                                                                                                                                                            g
                                                                                                                                     .
                                                                                                                                                                                                                                                 멂
                                                                                                                                                                                                             5
```

```
RESULT 1
ABL58209
ID ABI
XX ABI
XX ABI
XX ABI
XX AGI
XX AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New is plants resist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coat I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequei
                                                                                                                                                                                                                                                                                                                                                                                                       Agroba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABL58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               known
quash,
infect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                    17-MAI
                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                                                                                                                                                            Agroba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Agroba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABL58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Boesh
                                                                                                                 17-MAI
                                                                                                                                                             05-0C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ASGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Fig 8; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-JU
                          (RURA
                                                                                                                                                                                                         KR990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>6</u> –
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based CP sequences. The genes may be used for producing plants such as , cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 solated cucumber mosaic virus coat protein DNA -s, partic. of the family Cucurbitaceae or Solana tant to infection.
                                                                     R-1998;
                                                                                                                R-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1996-333993/33.
B; AAR93803.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ore ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C-1994;
                                                                                                                                                             T-1999
                                                                                                                                                                                                       75101-A.
                                                                                                                                                                                                                                                                                                                                                                acterium
                                                                                                                                                                                                                                                                                                                                                                                                                                 acterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      209 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -) ASGROW SEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          L-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1018-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 81.1%; Somilarity 100.0%; I
                          RURAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCG 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP; 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mcmaster
                                                                                                                                                                                                                                                                                                                                                                tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                              tumefaciens;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tumefaciens
                          DEV ADMINISTRATION.
                                                                      98KR-00009096.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94US-00367789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95WO-US007234.
                                                                                                                 98KR-00009096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
3. .659
/*tag= a
                                                                                                                                                                                                                                                                                             105.
                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                 product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA; 894 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; 201 C; 185
                                                                                                                                                                                                                                                                                               .760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          coding
                                                                                                                                                                                                                                                "Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                 anti-cucumber mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tricoli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 43; DB 2; Length 772; Pred. No. 1.5e-13; 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G; 211 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Reynolds JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         n DNA - used
Solanaceae,
                                                                                                                                                                                                                                                                                                                                                                                                                              virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Other;
                                                                                                                                                                                                                                                 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                              transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to produce which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                   tomato;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ဝ္ဗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
```

```
Search completed: December
Job time : 223 secs
                                              ద
                                                                 S
                                                                                       Query Match 71.7%; Score 38; DB 3; Length 894; Best Local Similarity 100.0%; Pred. No. 7.6e-11; Matches 38; Conservative 0; Mismatches 0; Indels
                                                                                                                                                          This sequence represents a coding sequence from Agrobacterium tumefaciens used within the scope of the invention. The invention relates to an anticucumber mosaic virus tomato
                                                                                                                                    Sequence 894 BP; 188 A; 228 C; 216 G;
                                                                                                                                                                                                       Disclosure; Page 4; 6pp; Korean.
                                                                                                                                                                                                                                                   WPI; 2000-577926/54.
P-PSDB; ABB80503.
                                                                                                                                                                                                                              Anti-cucumber mosaic virus tomato.
                                                                                                                                                                                                                                                                                      Sohn SH,
                                           Lee
                                                                                                                                                                                                                                                                                     SW,
                                                                                                                                                                                                                                                                                       Park
           ຸຮ
                                                                                                                                                                                                                                                                                     JS,
           2004, 07:10:27
                                                                                                                                                                                                                                                                                     Hwang YS;
                                                                                                                                   262 T;
                                                                                                                                      0
                                                                                                                                      U; 0 Other;
                                              148
                                                                                         0;
                                                                                         Gaps
                                                                                         0
```

version - 2004

σ

H ք

```
Minimum
Maximum
                                                                                                                                                                                                                                                         Title:
Perfect
Sequence
                                                                                                              Result
No.
                                                                                                                                                                                                       Po
                                                                                                                                                                                                                             Total
                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                       ataba
                                                                                                                                                                                                                                     earche
                                                                                                                                                                                                                                                  coring
                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                                             protein
 ဋ္ဌ
                                                                                                                                    Pred. N
score c
and is
                                                                                                                                                                                                                             numbe
                                                                                                                                                                                                        roce
                                                                                                                                                                                       መ
                                                                                                                                                                                                                                                           Φ
                                                                                                                                                                                                                DB
DB
                                                                                                                                                                                                                                                               scor
                                                                                                                                                                                                                                                  tabl
                                                                                                              S
                                                                                                              ñ
                                                                                                                                                                                                                    Œ
                                                                                                               Ö
                                                                                                                                    greate
greati
 ZO
                                                                                                                                                                                                               pa
Pa
                                                                                                                                                                                                                                                  Φ
                                                                                                                                                                                                                                                               Œ
                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                             m
                                                                                                                                                                                                                \mu
                                                                                                                                                                                                                                             BLOSUM6;
Gapop 1
length:
                                                                                                                                                                                                                             hits
                                                                                                              Que
                                                                                                                                                                                                                                                          1
69
                                                                                                                                                     8 7 6 5 4 3 2 1
                                                                                                                                                                                                                                     2002273
                                                                                                                                                                                              Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                    December
                                                                                                                                    er t
                                                                                                                                            \omega
                                                                                                                                                     . . . . . . . . . .
                                                                                                                                the.
r than
4 by
                                                                                                                                                                                                                                                          MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                                  Geneseq_23Sep04:*
geneseqp1980s:*
geneseqp1990s:*
geneseqp2000s:*
geneseqp2001s:*
geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
                                                                                                                                                                                      Gene
 당겼
                                                                                                                                                                                                                                                                   -60
                                                                                                                                                                                                                            satisfying
                                                                                                                                                                                                                                                                                             search,
                                                                                                               ۲
                                                                                                                                                                                                                                                                   857-841-
                                                                                                                                                                                                                0
20000000000
                                                                                                              ength
                                                                                                                                            number
                                                                                                                                                                                                                                              0.0
                                                                                                                                    n or equal analysis c
seqs,
                                                                                                                                                                                              Match
Match
first
                                                                                                                                                                                                                                                                                   5,
                                                                                                                                                                                                                                                                                                         GenCore
(c) 1993
                                                                                                                                                                                                                                                                                            using
                                                                                                                                                                                                                                                                                    2004,
                                                                                                                                                                                                                                             Gapext
                                                                                                                                            0
                                                                                                                                                                                                                                     3587
  0%
100%
45 gt
                                                                                                                                                                                                                             chosen
                                                                                                                                   results l to the of the t
AAY90255
AAR10652
AAR10653
AAR10653
AAR57968
AAR93803
AAR98895
AAR98895
AAR98895
AAR98895
AAR37212
AAG05253
AAG05253
AAG057865
AAG057865
AAG057865
AAG057865
AAG057865
AAG011773
AAM41266
ABU11773
AAM39480
ABB61652
ADD45534
ADD45534
ADD45534
ADD61258902
                                                                                                                                    ٥
                                                                                                              ID
                                                                                                                                                                                                                                     29299
                                                                                                                                                                                               summarie
                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                            38
                                                                                                                                                                                                                                                                                    07:10:32
                                                                                                                                                                                                                                              0
                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                             mode.
                                                                                                                                                                                                                                              ហ
                                                                                                                                                                                                                            parameters
                                                                                                                                   s predicted by e score of the total score di
                                                                                                                                                                                                                                     esidue
                                                                                                                                                                                               œ
                                                                                                                                                                                                                                                                           ; Search time 71 (without alignment 70.735 Million cel
                                                                                                                                                                                                                                                                                                         5.1.6
Compugen
                                                                                                                                    d by chance to hav
the result being
re distribution.
                                                                                                                                                                                                                                                                            cell
Aay90255
Aar10652
Aar10653
Aar10653
Aar57968
Aar67753
Aar98894
Aar98895
Abb80503
Adc61973
Aag00746
Abo57865
Aae36184
Aam41266
Aau23534
Abu11773
Aam39480
Abb61652
Ade58906
Ade61258
Ade61258
                                                                                                              Description
                                                                                                                                                                                                                                                                                    Seconds
                                                                                                                                                                                                                                                                           updates
Capsid pr
Capsid pr
Capsid pr
Cauliflow
CMV coat
Coat prot
Coat prot
Coat prot
Coat prot
Agrobacte
Transcrip
Cucumber
Arabidops
Human gen
Human GGD
Human pol
Novel hum
Human pol
Drosophil
Human Pro
Human Pro
Human Pro
                                                                                                                                       printed
                                                                                                                                            ģ
                                                                                                                                                                                                                                                                           /sec
```

4	4	4	4	4	4	w	w	<b>س</b>	w	ω	(L)	u	w	LJ.	w	N	N	N	N	
										S										
										38										
	Ü	•	ت. •	Ü	<b>5</b>		<b>.</b>	<u>ა</u>	<u>ភ</u>	55.1	<u>ហ</u>	<u>ა</u>	<u>.</u>	<b>5</b> 1	<u>.</u>	<b>.</b>	5	<b>5</b>	<b>.</b>	
					93	167	54	51	51	626	N	σ	W	Ś	7	J	φ			
σ	4	4	w	ហ	σ	w	w	w	N	ထ	æ	œ	7	7	w	N	ထ	თ	4.	
6114	6462	6634	2661	0314	7668	3848	3848	3848	3208	ADP43242	4324	4323	0828	0787	6728	2223	5743	807	55	
11	σ	663	99	Abp03145	p76680	g384	938481	38482	2080	13242	3243	3232	8287	7876	72	2239	74		Aau41552	
Propionib	Propionib	×	Arabidops	Human ORF	Streptomy	Arabidops	Arabidops	Arabidops	Yeast wea	Nematode	Nematode	Nematode	ወ	Rice prot	Human zon	Human ZP3	Hairless	Propionib	Propionib	

## T 1 )255 AAY90: 255 standard; protein; 14 A

ALIGNMENTS

19-SEI AAY90: 255; P-2000 (first entry)

Ubiquitin monomer C-terminal fragment

Ubiqu: itin monomer; protein production; plant cell; ubiquitin promoter

WO200036129-A1

Nicot

lana

tabacum.

22-JUN-2000.

11-DEC-1998; 98WO-SG000103.

11-DE 7-1998; 98WO-SG000103:

(MOLE INST MOLECULAR AGROBIOLOGY.

Fang ₩u J, Chen ×

WPI; 2 2000-431604/37. AAA30858.

Production of desired protein ubiquitin monomer coding seque desired protein. sequence ij plants plants or upstream plant of the cells e gene by linking a encoding the

Claim 7; Page 18; 42pp; English.

protein, where expression is also relates to cell, that commonomer linked the fusion conconstruct alloplant cells This s The ir protei sequence invention ession is not controlled by the ubiquitin promoter. The invention relates to a NA acid vector a NA vector able to transform a plant that comprises NA encoding a fusion protein having a ubiquitin ler linked to a protein of interest and further, where expression of usion construct is not under control of a ubiquitin promoter. The ruct allows enhanced production of the desired protein in plants or ruct allows enhanced production of cells in in a plant or plant cell by inserting ing a ubiquitin monomer upstream of a NA where the fusion construct encodes a on is not controlled by the ubiquitin m relates plant or represents the C-terminal fragment of a ubiquitin m relates to a method for enhancing production of a d olant or plant cell by inserting a nucleic acid (NA) encoding the fusion protei protein desired and desired P H

Ġ

```
RESULT 2
AAR10652
ID AAR1065
             RESULT
AAR1065
ID AA
XX
                                                                                                          Ş
                                                                                    8
                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
 AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ö
                                                                                                                                 Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-AUG-2003
25-MAR-2003
16-APR-1991
                                                                                                                                                                                                                                                                                                                                       culture on resistant t
                       )653
AAR10653
                                                                                                                                                                                                  The gene encoding this protein was isolated from a plasmid (pUC18) containing DNA complementary to RNA 3 of the virulent strain FNY, isolated in New York on infected melons. Transgenic melon plantlets containing the nucleotide sequence introduced via an Agrobacterium tumefaciens intermediate are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10462. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003) to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13
 AAR1065
                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                               Transgenic
                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1991-046027/07
N-PSDB; AAQ10461.
                                                                                                                                                                                                                                                                                                                                                                                                                          Deboth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-AUG-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR10652;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP412912
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BIOC-)
                                                                                                                                                                                equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matc]
Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEB-1991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            resistance;
                                                                                                                                                                                                                                                                                                                 15,
                                                                                                                                                          Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ហ
                                                                                                                            Similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                         ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                           \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
.4; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  BIOCEM
                                                                                  MDKSESTS
||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDKSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mosaic
                                                                                                                                                                                  218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                         \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stand
                                                                                                                                                                                                                                                                                                                Page
                                                                                                                                                                                                                                                                                                                                         to.
                         ct
                                                                                                                                                                                                                                                                                                                                                              melon
                                                                                                                                                                                                                                                                                                                                      melon plantlets pospecific medium for cucumber mosaic
                         ø
                                                                                                                                                                                                                                                                                                                                                                                                                         Bentahar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ~•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                         ndard;
                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
(revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STSAGRNRR
                                                                                                                                                                                                                                                                                                                17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89FR-
                                                                                   TSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       virus
                                                                                                       SAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cucumber
                       protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                44pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                          ຜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         00010848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                004022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.09
100.09
Live
                                                                                                           14
                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                 French.
                                                                                                                                                                                                                                                                                                                                                                                                                           ě
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ##
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 œ
                                                                                                                                                                                                                                                                                                                                                  prodn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mosaic
                         218
                                                                                                                                 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                        or new
                                                                                                                                                                                                                                                                                                                                                                                                                         Z,
                                                                                                                                               S
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D Q
                                                                                                                                 Score 69; I
Pred. No. 0.
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 69; I
Pred. No. 3.
Mismatches
                         AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ያ
                                                                                                                                                                                                                                                                                                                                                                                                                         Perret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cucumis
                                                                                                                                                                                                                                                                                                                                                             from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Virus
                                                                                                                                                                                                                                                                                                                                                     c
                                                                                                                                             89;
                                                                                                                                                                                                                                                                                                                                                   om transformed shoot ransformed plants et
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3
3.8e-1
                                                                                                                               DB 2;
0.00071;
                                                                                                                                                                                                                                                                                                                                                                                                                        ij.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            me1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FNY.
                                                                                                                                                                                                                                                                                                                                                   plants
                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                   etc
                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.
                                                                                                                                                                                                                                                                                                                                                              γd
                                                                                                                                                                                                                                                                                                                                                   esp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                               two=sta
                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                   2003
                                                                                                                                                                                                                                           The
                                                                                                                                                                                                                   to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                 0
AARSU 
                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                           밁
```

FR270:

1960-A1

02-SE

26-FE

3-1993;

93FR-00002269.

Cauli

Elower

mosaic

```
Query Ma
Best Loc
Matches
                                                                                                                                        SULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-AUG-2003
25-MAR-2003
16-APR-1991
                                                                                                                         LT 4
7968
AAR579
Cauli
polyr
                                                              25-MAR
20-APR
                                                                                                                                                                                                                                                                                            Sequer
                                                                                                                                                                                                                                                                                                                   The gene encoding this protein was isolated from the virulent French strain 117F of CMV. Transgenic melon plantlets containing the coding sequence (introduced via an Agrobacterium tumefaciens intermediate) are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10461. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.) (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EP412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Capsi
                                                                                                                                                                                                                                                                                                                                                                                                                                               Transgenic melon plantlets prodn. from transformed shoots - culture on specific medium for new transformed plants etc., resistant to cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A-A
                                                                                                   AAR57
                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-
                                       Cauli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Debot.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (BIOC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-AUG-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cucumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PS;
                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FE
                                                                                                                                                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ㅁ
                                                              R-2003
R-1995
                                                                                                   968;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       K
K
             flower
                                                                                                                                                                                                                                                                                             nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1991-046027/07.
B; AAQ10462.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -) BIOCEM SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B-1991
 ibozyme;
                                        Elower
                                                                                                                            968 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    912-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ber mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     strain 117F;
                                                                                                                                                                                                                                                                                                                                                                                                                        16; Page 19; 44pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein of
                                                                                                                                                                                                                                          14;
                                                                                                                                                                                                                  _
                                                                                                                                                                                                                                         100.0%;
Similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                  MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                             218 AA;
                                                                                                                                                                                           MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bentahar
            mosaic
                                       mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (revised)
(revised)
(first en
                                                              (revised)
(first en
saic virus; inactivate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89FR-00010848.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90EP-00402282.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cucumber Mosaic Virus strain 117F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     resistance;
                                                                                                                           protein;
                                     virus capsid protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Noe1
CMV; capsid protein; coat inactivation; resistance;
                                                                                                                             218
                                                                                                                                                                                                                                           <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z
                                                                                                                                                                                                                                                    Score 69;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   capsid
                                                                                                                              A
                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perret
                                                                                                                                                                                                                                                                  69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                        DB 2; L, 0.00071;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cucumia
                                                                                                                                                                                                                                                                    Length 218;
protein; crop prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     melo.
 protection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              by two=stage eap.
                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                           0;
```

```
RESULT
AAR6775
ID XX
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Ma
Best Loc
Matches
DNA constructs encodes RNA tha eliciting agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence of new vi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The RNA encoding the capsid protein of cauliflower mosaic virus can be targetted by a nucleic acid sequence called a "polyribozyme". The polyribozyme has endoribonuclease activity and is able to inactivate to gene encoding the viral capsid protein. The polyribozyme comprises several catalytic regions derived from ribozymes and confers complete resistance to virus. See AAQ67391-94. (Updated on 25-MAR-2003 to correpn field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lene
                                                                                                            De
                                                                                                                                                                                                                                                                                                                                                           virus resistance; disease hypersensitive response; c Lycopersicon esculentum; t TOMV; CMV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₹
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure;
                                                                                                                                          (SANO
(SANO
(SANO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-FEB-1993;
                                                                                                                                                                                                        04-JUN-1993;
                                                                                                                                                                                                                                     03-JUN-1994;
                                                                                                                                                                                                                                                                   22-DEC-1994.
                                                                                                                                                                                                                                                                                                 WO9429464-A1
                                                                                                                                                                                                                                                                                                                                Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                          Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR67753;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR67753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GENE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                              PSDB;
                                                                                                            Haan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polyribozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                          coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1994-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                               .995-036490/05
; AAQ76106.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
14; Conser
                                                                                                                                          SANDOZ
SANDOZ-
SANDOZ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENE
                                                                                                             PT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAQ6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                           mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -281767/35
AQ67395.
   NA that agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   andard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          yme contg. several catalytic in inactivate gene for viral resistant transgenic plants,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SHEARS
                                                                                                                                          Z LTD.
Z PATENT GMBH.
Z-ERFINDUNGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93FR-
                                 for
                                                                                                                                                                                                        93GB-00011593
                                                                                                                                                                                                                                       94WO-EP001817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                         virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ā
                  interacti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rvative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gruber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0000226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ein;
                                                                                                                                                                                                                                                                                                                                                                                                                         tomato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ).0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               French.
                                                                                                                                                                                                                                                                                                                                                                            mato mosaic virus; minus-strance; resistance; transgenic plant;
crop improvement; tomato;
tobacco; Nicotiana tabacum; co;
                    ing pathogen,
s with viral
                                                                                                                                            VERW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 69; Pred. No. 0.0 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baudot
                                                                                                                                            GES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA
                                                                                                                                              HEM
                    RNA p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
O.r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           capsid pr
capsid pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     )B 2;
.00071;
0;
                polymeras
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ollivo
                                                                                                                                                                                                                                                                                                                                                                                                                         minus-strand
                                 virus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence e
                    Φ
                                 resistance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complementary
                                                                                                                                                                                                                                                                                                                                                                              coat
                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                stance to generate
                                                                                                                                                                                                                                                                                                                                                                                                           cross
                                                                                                                                                                                                                                                                                                                                                                                                                           RNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           p. for pre
encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                           protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gap
                   plants
an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prepn.
                                                                                                                                                                                                                                                                                                                                                                              Çħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                эd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>0</u>
```

Query Ma Best Loc Matches

Loc

14;

0;

Score 69; DB 2; Pred. No. 0.00071; Mismatches 0;

Length

Indels

0;

Gaps

0

MDKSESTSAGRNRR 14

Match

```
RESULT 6
AAR93803
ID AARS
XX AAR93803
ID AARS
XX AAR93803
ID AARS
XX AAR9
AC AARS
XX Coat
XX Coat
XX Coat
XX Coat
XX WPI
PR WPI
CCC Coat
XX Coat
XX Coat
XX Coat
CCC CCC Coat
CCC CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CCC
CCC CC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                     New isolated oplants, particely resistant to
                                                                                                                                   mosaic
infect
known
quash,
infect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A chimeric cucumber mosaic virus RNA-3 (given in AAQ76106) codes for the coat protein (CP) of tomato mosaic virus (AAR67552) as well as its own CP (AAR67753). The construct elicits minus-sense RNA that interacts with the RNA-dependent RNA-polymerase of an invading virus, thus conferring virus-resistance on a host plant, e.g. tobacco, tomato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                              WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAR93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Coat
                                                                                                                                                                                                                                               Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resi
                                                                                        Sequence
                                                                                                                                                                                                                                                                                           Disclosure; Fig 8; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Boeshore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W0962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-OCT-2003
02-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR93803;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ASGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cucumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 y Match
Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  stance.
                                                                                                                                protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based (CP sequences. The genes may be used for producing plants such as cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                 solated cucumber mosaic virus coat protein DNA - useds, partic. of the family Cucurbitaceae or Solanaceae, tant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            803
                                                                                                                                                                                                                                                                                                                                                                                                                              1996-333993/33.
B; AAT17259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oer mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -) ASGROW SEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1018-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
Similarity 100.0%;
L4; Conservative
similarity 100.0%; l4; Conservative (
                                                                                              218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     218 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 30;
                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mcmaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94US-00367789.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95WO-US007234.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A35 strain of cucumber mosaic virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      strain A35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tricoli DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 69;
Pred. No.
; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9; DB 2; I
o. 0.00071;
tches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Reynolds JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       V33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       V34;
                                                                                                                                                                                                                                                                                                                                                              to produce which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

 $(x_1,\dots,x_m) = (x_1,\mathbf{a}_{\mathbf{p}}) (x_1,\dots,x_m) \cdot \mathbf{a}_{\mathbf{p}} = \mathbf{a}_{\mathbf{p}} \oplus \mathbf{a}_{\mathbf{p}}$ 

```
RESULT 8
AAR98894
ID AAR9
XX AAR9
AC AAR9
XX AAR9
DT 16-C
DT 02-I
XX
DE Coat
XX
KW Coat
KW resi
XX
OS Cucu
                                                                                                                                                                                         RESULT
AAR9889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                              Ş
                                                                                                                                                           Query
Best I
Matche
                                                                                                                                                                                                    Coat protein (CP) genes of the mosaic virus (CMV) were isolate infected plant tissue by PCR am known CP sequences. The genes m quash, cucumber, peppers and to infection. (Updated on 16-OCT-2
                                                                                                                                                                                                                                                                                                     WPI; 199
N-PSDB;
                                                                                                                                                             ches
                   Coat
resi
                                                                                                                                                                                                                                                                       New isolated cucumber m plants, partic. of the resistant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T 7
                                         Coat
                                                       16-OCT-2003
02-DEC-1996
                                                                              AAR98894
                                                                                            AAR98894
                                                                                                                                                                                                                                                          Disclosure;
                                                                                                                                                                                                                                                                                                                          Boeshore
                                                                                                                                                                                                                                                                                                                                                                     07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                              Coat protein; resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
     Cucumber
                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                       30-DEC-1994;
                                                                                                                                                                                                                                                                                                                                                                                    11-501-
                                                                                                                                                                                                                                                                                                                                                                                                  WO9621018-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR98893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR988
                                                                                                                                                                                                                                                                                                                                         (ASGR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-0CT-1
                                                                                                                                                                   Local
                                                                                                                                                                           Match
                   protein;
stance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                        protein
                                                                                                                                                                                                                                                                                                    996-333993/33
; AAT34664.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2003
1996
                                                                                                                                                           similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                    1996
                                                                                                                                                                                                                                                                                                                                         ASGROW
                                                                                                                                                                                                                                                                                                                          ΜĽ,
                                                                                                                                MDKS:
                                                                                                                                       MDKSESTSAGRNRR 14
                                                                                                                                                                                          218
                                                                                            standard;
     mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                 mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MDKSESTSAGRNRR
                                                                                                                                                                                                                                                         Fig
                                                                                                                                                                                          A,
                                          0
f
                                                       (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                CP;
                                                                                                                                                                                                                                                                                                                          Mcmaster
                                                                                                                                                                                                                                                                                                                                                                                                                                      CP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     m
                                                                                                                                                                                                                                                                                                                                         SEED
                                                                                                                                                                                                                                                                                                                                                       94US
                                                                                                                                                                                                                                                                                                                                                                      95WO-US007234
                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
     virus;
                                                                                                                                                                                                                                                                                                                                                                                                                rus;
                          cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                       cucumber
                                                                                                                                                                                                                                                         80pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein;
                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                       -00367789
                                                                                                                                                                                                                                                                                                                                                                                                                                                    V27
                                         V33
                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                               mosaic ve family
                                                                                                                                                                                                                                                                                                                          JR,
     9
                                                                                                                                                                                                                                                                                                                                                                                                                 \boldsymbol{\omega}
                                                                                                                                                                                                      of the V27, V33, V34 and A35 strain of cucumbe isolated. The CMV CP genes were isolated from y PCR amplification of cDNA using primers base genes may be used for producing plants such as and tomatoes which are resistant to CMV 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    strain
                                         strain
     rain
                                                                                                                                                                                                                                                                                                                                                                                                                 rain
                                                                                                                                                                                                                                                          English.
                           mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                       mosaic
                                                                                                                                                            o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       218
                                                                                            218
                                                                                                                                                                                                                                                                                                                           Tricoli
                                                                                                                                                                                                                                                                               virus co
y Cucurbi
                                                                                                                                                            Score 69; DB
Pred. No. 0.0
; Mismatches
    V33
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Of.
                                         0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                      virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     cucumber
                          virus;
                                         cucumber
                                                                                                                                                                                                                                                                                                                          DM,
                                                                                                                                                                                                                                                                               coat prote
                                                                                                                                                          DB 2; L
0.00071;
0;
                          CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                       CMV;
                                                                                                                                                                                                                                                                                                                           Reynolds
                                         mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                     mosaic
                                                                                                                                                                                                                                                                               ein
or :
                          V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                       V27;
                                                                                                                                                                                                                                                                               DNA - used Solanaceae,
                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                          JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     virus
                                         virus
                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                      V33;
                          V33;
                                                                                                                                                                           218;
                                                                                                                                                                                                                                                                                                                           Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                      V34;
                                                                                                                                                                                                                                                                               to produce which are
                                                                                                                                                            0
                                                                                                                                                            Gaps
                                                                                                                                                            0
```

```
日
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                              Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                    LT 9
3895
AAR988
New is plants
                                                                                                                                                                                                                                                                                                                                                                               known
quash,
infect
                                                                                                                                                                                                                                                                                                                                                                                                                                                       New is plants resist
                                                                                                                                                                                                             16-OCT
02-DEC
                          WPI;
                                                                                                                                                                                                                                     AAR98
                                                                                                                                                                                                                                                                                                                                                                                                       mosaid
infect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI;
                                                                                                                                                                     resis
                                                                                                                                                                            Coat
                                                                                                                                                                                             Coat
                                                                                                                                                                                                                                                                                                                                                                                                                        Coat
                                                  Boeshore ML,
                                                                                                                    11-JUL-1996
                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ASGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JUL-1996
                                                                   (ASGR
                                                                                    30-DE
                                                                                                   07-JUN-1995;
                                                                                                                                     W0962
                                                                                                                                                     Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Boeshore ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO962
                                                                                                                                                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                     ; 5681
 solated cucumber mosaic virus coat protein DNA - used s, partic. of the family Cucurbitaceae or Solanaceae,
                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                      895
                                                                                                                                                                                                                                                                                                                                                                             protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based on CP sequences. The genes may be used for producing plants such as cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        solated
                                                                                                                                                                                                             T-2003
C-1996
                           1996-333993/33.
B; AAT34666.
                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       solated cucumber mosaic virus coat proteins, partic. of the family Cucurbitaceae or stant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -) ASGROW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2-1994;
                                                                    -) ASGROW SEED
                                                                                                                                     L018-A1
                                                                                                                                                     per mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L018-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       996-333993/33
; AAT34665.
                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                                                                                                                                                            1 100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                              MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                               218 AA;
                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                               MDKSESTSAGRNRR
                                                                                                                                                                                                            (revised)
(first en
                                                                                                                                                                                              of the V34 strain of cucumber mosaic virus
                                                                                                                                                                            CP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mcmaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEED
                                                                                    94US-00367789.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94US-00367789.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95WO-US007234.
                                                                                                    95WO-US007234.
                                                                                                                                                     virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                       2; 80pp;
                                                                                                                                                                             cucumber
                                                                                                                                                                                                                                                     protein;
                                                                                                                                                                                                             entry)
                                                                                                                                                     strain V34.
                                                  JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                        English.
                                                                                                                                                                             mosaic
                                                                                                                                                                                                                                                       218
                                                                                                                                                                                                                                                                                                                              0;
                                                   Tricoli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tricoli DM,
                                                                                                                                                                                                                                                                                                                              Score 69; DB 2;
Pred. No. 0.00071;
Mismatches 0;
                                                                                                                                                                                                                                                       AA.
                                                                                                                                                                             virus;
                                                   MG,
                                                                                                                                                                            CMV;
                                                   Reynolds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Reynolds JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                n DNA - used
Solanaceae,
                                                                                                                                                                                                                                                                                                                                               Length 218;
                                                   JF,
                                                                                                                                                                             V33;
                                                   Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carney
                                                                                                                                                                             V34;
  to produce which are
                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                               0
```

AD061

.973;

```
RESULT 10
ABB80503
ID ABB80
XX
AC ABB80
XX
AC ABB80
XX
AC ABB80
XX
DT 25-JU
XX
AGrob
RESULT 11
ADO61973
ID ADO61973
                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FXSXSSSSSXS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Matc
Best Local
Matches
                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                           This sectume faci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Coat protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber mosaic virus (CMV) were isolated. The CMV CP genes were isolated from infected plant tissue by PCR amplification of cDNA using primers based known CP sequences. The genes may be used for producing plants such as quash, cucumber, peppers and tomatoes which are resistant to CMV infection. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KR99075101-A
                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-577926/54
N-PSDB; ABL58209.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-MAR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABB80503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure;
                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                Disclosure;
                                                                                                                                                                                                                                                                                                                                                                   Anti-cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABB805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (RURA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        equence
                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
Local (
                                                                                                                                                                                          Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SH,
                                                                                                                                                                                                                                                                             sequence represents aciens used within t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03
                                                                                                                                                        . Similarity 13; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 100.0%
Similarity 100.0%
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998
                                                                                  MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RURAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDKSES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218
                                                                                                                                                                                                                            218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to
                                                                                                                                                                                                                                                             cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           andard;
                                                                                                                                                                                                                                                                                                                              Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (fi
                                                                                                                                                                                                                                                                                                                                                               mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tume
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tume
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98KR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98KR-00009096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . T8
                                                                                                                                                                                                                                                           presents a p
within the
ber mosaic v
                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                         rvative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADMINISTRATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   faciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80pp;
                                                                                                                                                                                                                                                                                                                            6pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            00009096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                      88.4%;
92.9%;
                                                                                                                                                                                                                                                                                                                                                                   virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ens;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                      JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                     14
                                                                                                                                                                                                                                                                                                                                Korean
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                      procein sequence from Ag
scope of the invention.
virus tomato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    •• ••
                                                                                                                                                                                                                                                                                                                                                                   tomato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                      Score 61; DB Pred. No. 0.010; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hwang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 69; DB 2;
Pred. No. 0.0007
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                      YS;
                                                                                                                                                                      DB 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71;
                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                             Agrobacterium
on. The invention
                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                        218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                         .
                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                              relates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tomato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                         0
```

```
18-SEF
17-DEC
24-APF
                                                        Jiang
Riechm
                                                                                                                                                                                                                                 low n
         New
                            WPI; 2
                                                                                                                                                                                                                                                    Plant
                                                                                                                                                                                                                                                                        Trans
                                                                                                                                                                                    WO200
                                                                                                                                                                                                                                                                                           15
polype
                                                                                     (MEND
                                                                                                                                                                 15
                                                                                                                                                                                                     Arabidopsis
                                                                                                                                                                                                                        glyphosate
                                                                                                                                              \boldsymbol{\omega}
                                                                                                                                                                -API
                                                                                                                                                                                                                                                                                            -JUL-2004
                                                                                                                                              SE
                                                                                                       P-2002;
C-2002;
R-2003;
                                                         mann
                           2004-330163/30
B; ADO61972.
                                                                                                                                                                                    1031349-
         ecombinant
                                                                                                                                              P-2003;
                                                                                                                                                                 ₹-2004
                                                                                                                                                                                                                                                                        ription factor
                                                                  Ç
                                                                                                                                                                                                                                  trogen
ptides,
                                                                                                                                                                                                                                                     transcription factor;
                                                                                    MENDEL BIOTECHNOLOGY
                                                                                                                                                                                                                                            stress
                                                        JĽ,
                                                                 Heard JE
                                                                                                                                                                                                                          resistance;
                                                                                                                                                                                                       thaliana.
                                                                                                                                                                                                                                 tolerance;
                                                                                                       2002US-0411837P.
2002US-0434166P.
2003US-0465809P.
                                                                                                                                              2003WO-US030292
                                                                                                                                                                                                                                                                                           (first
                                                         Haake
                                                                                                                                                                                                                       ption factor; transgenic plant; abiotic stress tolerance; cold tolerance; heat tolerance; lerance; low phosphate tolerance; fungal diseastance; flowering; fertility; seed development
                                                                                                                                                                                                                                                                                            entry)
                                                        Ratcliffe
V, Dubell
                                                                                                                                                                                                                                                                        G2565,
                                                        Dubel1
                                                                                                                                                                                                                                                                        SEQ
                                                                                     INC.
                                                O,
                                                                                                                                                                                                                                                                         U
                                                                                                                                                                                                                                                                         440.
                                                        Creelman
, Keddie
                                                        RA,
JS,
                                                         Adam LJ, R
Sherman BK;
   with
                                                                                                                                                                                                                                                      stress
                                                                                                                                                                                                                                   disease;
advantageous
                                                                   Reuber
                                                                                                                                                                                                                                                      tolerance
                                                                  TL;
```

prope compared to nt polynucleotide encoding transcription useful for producing transgenic plants unpared to a reference plant.

Disclo SEQ IJ NO 440; 510pp; English.

increased germination in cold, increased tolerance to below the stress, increased tolerance to cold, cold, increased tolerance to tolerance to cold, increased tolerance to tolerance to cold, cold, increased tolerance to tolerance to cold, increased tolerance to tolerance to cold, increased tolerance to low nitrogen conditions, increased tolerance to heat, increased tolerance to low phosphate conditions, increased tolerance to disease, including conditions, increased tolerance to glyphosate, increased sensitivity to man, reduced sensitivity to ABA, reduced sensity, altered tolerance to gapta sensing, increased tolerance to the sugars, altered carbon/nitrogen sensing, early flowering, late carbon/nitrogen sensing, early flowering, late tolerance to the sugars, altered flower structure, loss of flower determinacy, reduced exploration, altered sensity, altered trichome determinacy, reduced to altered stem morphology, altered vascular tissue structure, reduced callered trichome structure, altered active, altered branching pattern, altered send reduced content, altered send right pattern, slow growth, fast growth, altered send rightion, altered send development, altered send rightion, altered send development, altered send rightion, altered send cell differentiation, increased leaf send programmed cell differentiation, increased leaf wax, increased leaf send plants, dark content, altered send mass, light content, altered send plants, large send, increased leaf wax, increased leaf send plants, large send, increased leaf wax, increased leaf send plants, large send, increased leaf wax, increased leaf send plants, dark content, altered send plants, large send oil callered send plants, large send plants, dark content, altered send plants, altered protei sequer (II), The ק resent can Le used to produce transgenic plants, which overexpress the transgenic plant has an altered trait as compared to nic plant or wild-type plant. The transgenic plant compared to plerance to osmotic stress, increased tolerance to abiotic stress, increased.

in heat. increased. invention and n be compared to þ

o oktober at page kille e njegova je njegova i nje

standard;

protein;

```
RESULT 12
AAR37212
ID AAR37212
XX
AC AAR37212;
XX
Cucumber 126-AUG-19
XX
Cucumber 126-AUG-19
XX
Cucumber 126-AUG-19
XX
Cucumber 126-AAR-19
XX

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25 X Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                     Ş
                                                           Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Best I
Matche
                                                                                                                                                                      The 3' terminal 140-320 bases of the segmental genome RNA sequences of Bromovirus, Alfalfa mosaic virus and Cucumovirus (including CuMV) show a high degree of homology and this information was used to design a primer (see AAQ41743) complementary to part of the 3' terminal non coding region of the RNA3 (encodes the coat protein) of CuMV-Q which was used to prime synthsis of a cDNA sequence using RNA3 of CuMV-W as a template. The ds cDNA corresp. to RNA3 of CuMV-W was introduced into plasmid pUCl9 and used to transform E. coli. Transformants contg. an insert of 800 bp were selected and sequenced. The CuMV-W coat protein gene sequence may be used to transform plants to produce transgenic plants with resistance to CuMV infection. Protected plants are pref. maize or from Curcurbitaceae or Solanaceae species, e.g. cucumber, melon, squash, tomato, potato or tobacco. (Updated on 24-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   electronic format directly ftp.wipo.int/pub/published_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1992-151218/18
N-PSDB; AAQ41742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-MAR-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ល
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protecting plants a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-1992.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-OCT-2003
26-AUG-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  olanaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                     \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AECI
UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transformants;
                                                           Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 9; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fig
MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                      218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  melon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LTD.
OF CAPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hackland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        91ZA-00004563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90ZA-00002044.
                                                                                                                                                                                                                                                                                                                                                                                                                                             18pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          virus-W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  against c
                                                              rvat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ised)
st entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                squash;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63.8%;
64.3%;
tive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOWN.
                                                            60.
64.
                                                                                                                                                                                                                                                                                                                                                                                                                                                English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 transgenic | ash; tomato;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         coat
                      14
                                                                              ψφ
                                                                             $000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cucumber n of virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from WIPO at
pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kunert
                                                        Scor
Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 44;
Pred. No.
2; Mismato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                              core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mber mosaic virus infection -
virus strain and isolated DNA
                                                         ore 42; DB
ed. No. 39;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plant; maize; Cur
; potato; tobacco.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ਵ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
37;
ches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Collad
                                                                                                 ν
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DDA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ...
                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 438;
                                                                                                Length
                                                         ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Curcurbitaceae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rybicki
                                                                                                 218
                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            relates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gap
                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to
                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
```

```
PAGOS PARRES PRESENTAR DE PRESE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein identif hybridisation a termination sec
11-MAY

11-MAY

11-MAY

11-MAY

11-MAY

11-MAY

11-MAY

21-MAY

21-MAY
                                                                                                                                                                                                                                                                                                                                                                                                                                        25-FEB-
05-MAR-
09-MAR-
23-MAR-
25-MAR-
29-MAR-
01-APR-
                                                                                                                                                                                                                                                                                      21-APR
23-APR
23-APR
23-APR
28-APR
30-APR
30-APR
04-MAY
06-MAY
                                                                                                                                                                                                                                                                                                                                                                                                06-APR-
08-APR-
16-APR-
19-APR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T 13
5253
AAG05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-0CT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAG05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -FEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3405-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                r-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;000;
   MDKSESPNASRTSR
   ανανανανανανανδικής συστρούς συστρούς συστρούς συστρούς συστρούς συστρούς συστρούς συστρούς συστρούς συστρούς
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
   ntification; signal on assay; genetic massay; sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
00EP-
 protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mapping; gene of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         n pathway; mexpression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          metabolic
n control;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pathway;
promoter;
```

```
RESULT
AAG0074
ID AA
XX
                             S
                                     Que:
Besi
Mat
                                     ery Mai
t Loca
ches
   T 14
)746
AAG00
                                                    28 - OCCITITION OCCITI
                                         5
    46
                      17
                              N
                                     လေ
                                                    imi
                                                     ລ
                      S
                                                    and
                      SS-
                                     2
                              团
                              ST
                      <u>დ</u> —
                                      O D
                      ٠٠ م<u>ي</u>
                      SAGRN
                                                    ity
    rd
                                                    þ
                                                    rot
                              \vdash
                                     P- J U
                      27
                                     < N 0
                                                    Ø
                                      œ.
   in;
                                         70
                                         SP SP
                                         ** **
                                      יי ש מי
    4
                                         re
                                     Michie
                                     No
No
Sma
                                     DB
1.2
hes
                                         0
                                         + w
                                         0
                                         N
                                            Length
                                             N
                                      Ġ
                                             \boldsymbol{\omega}
                                             φ
                                     0;
                                     q
                                      0
```

THE REPORT OF THE PARTY OF THE

18-JUN-15
18-JUN

```
RESULT 15
ABO57865
ID ABO57
XX
AC ABO57
XX
DT 29-JU
XX
DE Humar
XX
KW Humar
XX
KW Humar
XX
OS Homo
XX
PN US201
                                                                                                                                                                                                                               몽
                                                                                                                                                                            5
                                                                                                                                                                                             Query Match
Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                  New nucleic obtaining cl diagnostic,
                                                                                                                                                                                                                                            The present sequence is a polypeptide encoded by one of a large number of 5' ESTs derived from mRNAs encoding secreted proteins. The 5' ESTs were prepared from total human RNAs or polyA+ RNAs derived from 30 different tissues. EST sequences usually correspond mainly to the 3' untranslated region (UTR) of the mRNA because they are often obtained from oligo-dT primed cDNA libraries. Such ESTs are not well suited for isolating cDNA sequences derived from the 5' ends of mRNAs and even in those cases where longer cDNA sequences have been obtained, the full 5' UTR is rarely included. 5' ESTs are derived from mRNAs with intact 5' ends and can therefore be used to obtain full length cDNAs and genomic DNAs. 5' ESTs are also used in diagnostic, forensic, gene therapy and chromosome mapping procedures. They are used to obtain upstream regulatory sequences and to design expression and secretion vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human;
                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 200
N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                      Human; gene alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                Human
                                                                                                                   ABO578
                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAG00746
      US2003194704-A1.
                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                              Dumas
                                                                                                                                                                                                                               equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ·FEB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEP-2000
                                                                                 JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  033401-A2
                                                                                                  7865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                              Milne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; 5' EST;
                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                genome
                                                                                                                                                                                                                                                                                                                                                                                                                              -000
                                                                                                                   9
                                                                                                                                                                                                                Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \boldsymbol{\omega}
                                                                                                                                                             53
                                                                                                                                                                                                                                                                                                                   derived from a d from total had EST second
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1999;
                                                                                                                                                                             w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ecreted
                                                                                                                                                                                                                                                                                                                                                                                                                    0-500381/45
AAC00752.
                                                                                                                                                                                             56. Similarity 58. 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENSET
                                                                                                                                                            QSESTNNGKNKR
                                                                                                                                                                              H
H
H
                                                                                                                  standard;
                                                                                                                                                                                                                                64
                                                                                                                                                                                                                                                                                                                                                                    SEQ
                                                                                                                                                                                                                                                                                                                                                                                            CDNAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST;
                                     expression; splicing eve
                                                                                                                                                                                                                                                                                                                                                                                                   acid
                                                                                                                                                                                                                               AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Edwards
                                                                                                                                                                         STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                     forensic
                                                                derived
                                                                                 (firs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000EP-00200610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                    ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   expressed chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0122487P
                                                                                                                                                                                                                                                                                                                                                                                           d that
                                                                                                                                                                                                                                                                                                                                                                    NO
                                                                                 (T
                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ein,
                                                                                                                                                                                                                                                                                                                                                                                          genomic
                                                                                                                                                                                                                                                                                                                                                                   4827;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ent
                                                                                 ent
                                        event
                                                                single
                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                             ወ
                                                                                                                                                                             14
                                                                                                                                                                                                     98. y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                               Duclert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mapping.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence
                                                                                                                                                                                                       ቀ ቀ
                                                                                                                                                                                                                                                                                                                                                                   71pp
                                                                                                                                                                                                                                                                                                                                                                                            Ò
                                                                                                                                                                                                      S. S.
                                                                                                                                                                                                                                                                                                                                                                                                     ທຸ
                                                                                                                                                                                                                                                                                                                                                                                   therapy
                                     gle exon
genomic
                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                           DNAs that co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ΙD
                                                                                                                    σ
                                                                                                                                                                                            Score 39; DB
Pred. No. 36;
4; Mismatches
                                                                                                                    æ
                                                                                                                                                                                                                                                                                                                                                                    +
                                                                                                                    ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SO:
                                                                                                                                                                                                                                                                                                                                                                                                                                              P
                                                               protein
                                                                                                                                                                                                                                                                                                                                                                   Sequence Listing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tag;
                                                                                                                                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4827
                                        probe; mic alteration
                                                                                                                                                                                                                                                                                                                                                                                                                                               Giordano
                                                                                                                                                                                                                                                                                                                                                                                   correspond chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          secreted
                                                                #4099
                                                                                                                                                                                               Ø → Ø
                                             microarray;
                                                                                                                                                                                                              ٠.
                                                                                                                                                                                                                                                                                                                                                                                     bsome
                                                                                                                                                                                             <u>;</u>
                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                            tag
                                                                                                                                                                                                                                                                                                                                                                                   mapping
                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                             ທັ
                                                                                                                                                                                                                                                                                                                                                                                            (5' ES
                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                    EST)
                                                                                                                                                                                                                                                                                                                                                                                   procedure
                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            isolat
                                                                                                                                                                                                                                                                                                                                                                                                     HOH
                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ion;
                                                                                                                                                                                             0
```

Search Job tin

time :

pleted: December 74 secs

ហុ

2004,

08:05:23

멍

SESTNNGKNKR

```
S
                                                                                                                                                                                     expression, comprising any of the 27,400 fully defined nuclectide expression, comprising any of the 27,400 fully defined nuclectide encoding at least 8 amino acids of any of the 6888 amino acid sequences fully defined in the specification, or their complements or fragments, and encoding at least 8 amino acids of any of the 6888 amino acid sequences fully defined in the specification. The probe is a single exon probe that hybridises under high stringency conditions to a nucleic acid molecule expressed in human cells or tissues. Also included are aspatially addressable set of single exon nucleic acid probes for measuring human gene expression (comprising a plurality of single exon nucleic acid grobes cited above, where each of the plurality of probes is separately and addressably isolatable or amplifiable from the plurality), a single exon microarray for measuring human gene expression, a method of continuous amino acids of any of the above- mentioned amino acid sequences (optionally with conservative amino acid substitutions), an isolated antibody that binds specifically to a peptide cited above, methods of selling and/or licensing single exon probes or microarrays to a customer desiring to measure gene expression, a method of providing human gene expression data by subscription, and a computer-readable storage medium which contains a database having a plurality of records (each record including data on the expression of a single exon probe cited above. The probe, methods and apparatus are useful in gene expression analysis. The probes may be used as tools for surveying tissues to detect the presence of expressed messages that contain their specific exon, or in constructing genome-cerived single exon microarrays. In addition, the probes are used in identifying and characterising anternative splicing events, in detecting and characterising or in expressing the ORF-encoded peptide. The present sequence is a human single exon protein of the invention. Note: The sequence is a human single exon portain of the inventi
                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                             to d

ific exon.

In addition,

alternative sp

alterations

smaller or

or in

sir
                                                                                                                                          single
this pa
obtaine
seqdata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene e
splici
                                                                                                        Sequer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Penn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (PENN/
(RANK/
(HANZ/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16
                                                      Coc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      003
                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human genome-derived single exon nucleic acid probes useful for human expression analysis, for identifying or characterizing alternative cing events, for assessing genomic alterations or as tools for reying tissues.
                                                                                                                                        e exon probe protein of the invention. Note: The sequent patent did not form part of the printed specification, ned in electronic format directly from USPTO at ta.uspto.gov/sequence.html?DocID=20030194704
                                                                                                          nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2004-119264/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      r-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45; SEQ ID NO
 w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PENN S
RANK D
HANZEL
                                   Similarity 58.7; Conservative
 KSESTSAGRNRR 14
                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rank DR,
                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002US-00029386.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002US-00029386.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ט א.
א.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31499; 80pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hanzel DK;
                                                     56.5%;
                                                    Score 39;
Pred. No.
                                       Mismatches
                                                    38;
                                                                         ъ.
С
                                                                       Length 68;
                                       Indels
                                                                                                                                                                              but
                                    0;
                                     Gaps
                                      0
```

ຜ

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                    Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tota
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      eа
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                       taba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             processing:
                                                                                                                                                                                                                                                                                                                                                                     Pred
score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  numbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                       œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
Bd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     table
                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                      # E
                                                                                                                                                                                                                                                                                                                    ñ
                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŧ
                                                                                                                                                                                                                                                                                                                                                                              gr N
     No. is the greater to derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                    Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \mu \mu
   1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10
                                                                                                                                                                                                                                                                                                                  Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                             PIR
1: 1
2: 1
3: 1
4: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -09-
                                                                                                                                                                                                                                                                                                                                                                   the number of r
r than or equal
ed by analysis o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Copyright
                                                                                                                                                                                                                                                                                                                                                                                                           79:*
pir1:*
pir2:*
pir3:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10.
                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G
    eqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
Match
first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore
(c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2004,
                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      621
     0%
100%
45 gi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chosen
                                                                                                                                                                                                                                                                                                                                                                     results 1 to the of the t
   TD

JQ1253

JQ1254

JC6075

S42098

S58039

JC6074

JC6073

S09663

JA0136

D71392

T21432

T31422

B83765

B44365

E95994

A56844

T129858

S60932

T46237

WMWQTD

T04505

E97944

AF2743

E97524

F98012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           summarie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07:34:22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ĺ
                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ' Ye
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ке
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rsion
2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                paramete
                                                                                                                                                                                                                                                                                                                                                                  predicted
score of t
total score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sidue
                                                                                                                                                                                                                                                                                                                                                                       ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Search time 23 (without alignment 58.567 Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                      score of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                          уd
                                                                                                                                                                                                                                                                                                                                                                     by chance the result k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  283
coat protein - cuc pypothetical protein - hypothetical protein - toba hypothetical protein conserved hypothetical protein conserved hypothetical protein ribonuclease III ( ribonuclease III ( probable outward r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nents)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  416
                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                     to hav being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seconda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                updates/sec
                                                                                                                                                                                                                                                                                                                                                                                          have
                                                                                                                                                                                                                                                                                                                                                                               printe
                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                 Ď,
```

RESULT 2  JQ1254  coat protein - cucumber mosaic virus (strain P6)  C;Species: cucumber mosaic virus, CMV C;Species: cucumber: J912 #sequence_revision 05-Aug-1994 #text_change 09-Jul-2004 C;Accession: JQ1254 R;Shintaku, M. J. Gen. Virol. 72, 2587-2589, 1991 A;Title: Coat protein gene sequences of two cucumber mosaic virus strains reveal a single A;Reference number: JQ1253; MUID:92013983; PMID:1919534 A;Accession: JQ1254 A;Accession: JQ1254 A;Residues: 1-218 <shi>A;Cross-references: UNIPROT:Q00261; GB:D10545; NID:g222026; PIDN:BAA01404.1; PID:g222027 A;Note: comparison of the amino acid sequence of this protein to that of strain FC shows R;Tsunasawa, S.; Narita, K. J. Biochem. 92, 607-613, 1982 A;Title: Micro-identification of amino-terminal acetylamino acids in proteins.</shi>	Coat protein - cucumber mosaic virus (strain FC) C.Species: cucumber mosaic virus, CMV C.Jate: 31-Mar-1992 #sequence_revision 05-Aug-1994 #text_change 09-Jul-2004 C.Accession: J01253 R;Shintaku, M. J. Gen. Virol. 72, 2587-2589, 1991 A,Filte: Coat protein gene sequences of two cucumber mosaic virus strains reveal a single A,Reference number: J01253 A;Molecule type: genomic RNA A;Residues: 1-218 <hi #status="" (met)="" 0;="" 1="" 1-218="" 100.0%;="" 14="" 14;="" 14<="" 1;="" 218;="" 69;="" <hi="" a="" a;contenn::="" a;cross-references:="" a;mole:="" a;molecule="" a;residues:="" a;title:="" acetylamino="" acetylated="" acid="" acids="" amino="" amino-terminal="" best="" c;keywords:="" c;superfamily:="" chlorosis.="" coat="" comparison="" conservative="" cucumber="" db="" end="" end;="" experimental="" f;="" gaps="" gb:d10544;="" genomic="" in="" indels="" induces="" length="" local="" match="" matches="" mdxsestsagrnrr="" micro-identification="" mid:sestsagrnrr="" mismatches="" modified="" mosaic="" nid:g222024;="" of="" p6="" pid:g222025="" pidn:baa01403.1;="" protein="" proteins.="" query="" rna="" score="" sequence="" shows="" similarity="" site:="" strain="" th="" that="" the="" this="" to="" type:="" uniprot:q00259;="" virus="" yellow=""><th>30 36 52.2 432 2 D86937  31 36 52.2 497 2 C82025  32 36 52.2 671 2 C96546  33 36 52.2 758 2 E81217  34 36 52.2 779 2 T34390  35 36 52.2 1532 2 A61262  36 36 52.2 1532 2 A61262  37 36 52.2 1908 2 A86311  38 35.5 51.4 1194 1 DJBE28  39 35 50.7 177 2 F72715  41 35 50.7 218 1 VCVXWL  43 35 50.7 218 1 VCVXWL  44 35 50.7 330 2 F72209  ALIGNWENTS</th></hi>	30 36 52.2 432 2 D86937  31 36 52.2 497 2 C82025  32 36 52.2 671 2 C96546  33 36 52.2 758 2 E81217  34 36 52.2 779 2 T34390  35 36 52.2 1532 2 A61262  36 36 52.2 1532 2 A61262  37 36 52.2 1908 2 A86311  38 35.5 51.4 1194 1 DJBE28  39 35 50.7 177 2 F72715  41 35 50.7 218 1 VCVXWL  43 35 50.7 218 1 VCVXWL  44 35 50.7 330 2 F72209  ALIGNWENTS
---	---	---

```
coat protein - cucumber mosaic virus C; Species: cucumber mosaic virus, CM A; Note: host Nicotiana tabacum cv. X; C; Date: 30-Jun-1990 #sequence_revision: JA0097 R; Nitta, N.; Masuta, C.; Kuwata, S.; Ann. Phytopathol. Soc. Jpn. 54, 516-19; A; Title: Comparative studies on the 19; Reference number: JA0096 A; Residues: 1-218 <NIT> A; Rosidues: 1-218 <NIT> A; Cross-references: UNIPROT: P18027 R; Tsunasawa, S.; Narita, K. J. Biochem. 92, 607-613, 1982 A; Title: Micro-identification of amina; Reference number: A61297; MUID: 8308 A; Contents: annotation; acetylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JS0090
C;Species: cucumber mosaic virus (strain O)
C;Species: cucumber mosaic virus, CMV
C;Date: 31-Mar-1992 #sequence_revision 05-Aug-1994 #text_change
C;Accession: JS0090; pS0314
R;Hayakawa, T.; Mizukami, M.; Nakajima, M.; Suzuki, M.
J. Gen. Virol. 70, 499-504, 1989
A;Title: Complete nucleotide sequence of RNA 3 from cucumber mo
A;Reference number: JS0089; MUID:89279231; PMID:2732698
A;Accession: JS0090
A;Molecule type: mRNA
A;Residues: 1-218 <HAY>
A;Cross-references: UNIPROT:P16489; GB:D00385; NID:g222030; PID
A;Accession: PS0314
A;Molecule type: protein
A;Residues: 216-218 <HA2>
R;Tsunasawa, S.; Narita, K.
J. Biochem. 92, 607-613, 1982
A;Title: Micro-identification of amino-terminal acetylamino aci
A;Reference number: A61297; MUID:83056735; PMID:6754709
A;Reference number: A61297; MUID:83056735; PMID:6754709
A;Rap position: segment 3
C;Superfamily: cucumber mosaic virus coat protein
C;Genetics:
A;Map position: segment 3
C;Superfamily: cucumber mosaic virus coat protein
C;Keywords: acetylated amino end; Coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: A61297; MUID A; Contents: annotation; acetylat: C; Comment: This cucumber mosaic v: C; Superfamily: cucumber mosaic v: C; Keywords: acetylated amino end F; 1/Modified site: acetylated am:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                              ई
                                                                                                                                                                                                                                                                                                                                                                                                              Query Matc
Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                            ဌ
                                                                                                                                                                                                                                                                                                                                                                                                           l Simi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 100.0%;
14; Conservative (
                                                                                                                                                                                                                                                                                                                                                   MDKS
                                                                                                                                                                                                                                                                                                                                                                    MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
larity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                  ESTS.
                                                                                                                                                                                                                                                                                                                                                    AGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   saic virus strain in
aic virus coat prote
> end; coat protein
ed amino end (Met) #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUID:
                                                                                                                                                                                                                    _revision
                                                                                                                                                                                                                                                                     virus
                                                                                                                                                            , S.; Takanami,
516-522, 1989
the nucleotide
    amino-terminal a
):83056735; PMID:6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   not
                                                                                                                                                                                                                                                                                                                                                                                                            ,
0
                                                                                                                                                                                                                                                       CMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83056735;
                                                                                                                                                                                                                                                                                                                                                                                                              Score 69; D
Pred. No. 3.
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
Pred.
                                                                                                                                                                                                                        Xanthi nc (ion 30-Jun-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       core 69; DE red. No. 3.6
                                                                                                                                                                                                                                                                      (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PMID:675470
                                                                                                                                                                                                                                                                                                                                                                                                        DB .
3 · 6e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1
3.6e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tein
                                                                                                                                                                                                                       (tobacco)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 induces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #status
                                                                                                                                                                                             ĸ
                                                                                                                                                           sequenc
                                                                                                                                                                                                                                                                                                                                                                                                   1;
%e-05;
0;
                    acetylamino
6754709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05
                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        experiment
                                                                                                                                                              Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 yellow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                              Of
f
                                                                                                                                                                                                                      _change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _change
                                                                                                                                                              cucumbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        н
                                     acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIDN: BAA00297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosa
                                                                                                                                                                                                                                                                                                                                                                                                                                            œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chloros
                                                                                                                                                                                                                          -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -60
                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                     in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                              mosa
                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   β.
Έ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bur
                                                                                                                                                              )
i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (CMV)
                                                                                                                                                              virus
                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PID: g22203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Βt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rain
                      8
```

```
RESULT 5

JC6075

Coat protein - cucumber mosaic virus (strain CS)

C;Species: cucumber mosaic virus, CMV

C;Date: 21-Jan-1997 #sequence_revision 21-Jan-1997 #text_change 09-Jul-2004

C;Accession: JC6075

R;Huaping, L.; Hu, J.S.; Barry, K.; Hweichung, F.

Chinese J. virol. 12, 235-242, 1996

A;Title: Coat protein gene sequence analysis of three cucumber mosaic virus strains infectory in the coat protein gene sequence analysis of three cucumber mosaic virus strains infectory in the coat protein gene sequence analysis of three cucumber mosaic virus strains infectory in the coat protein gene sequence analysis of three cucumber mosaic virus strains infectory in the coat protein gene sequence analysis of three cucumber mosaic virus strains infectory in the coat protein gene sequence analysis of three cucumber mosaic virus coat protein

C;Genetics:
A;Genetics:
A;Genetics:
A;Genetics:
Coat protein
C;Keywords: coat protein
                                                                                                                                                                                          coat protein - cucumber mosaic virus
C;Species: cucumber mosaic virus, CMV
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #to
C;Accession: S42098
R;Hyon, S.; Park, Y.I.
submitted to the EMBL Data Library, February 1994
A;Description: Nucleotide sequence of cDNA from RNA4
A;Reference number: S42098
A;Accession: S42098
A;Status: preliminary
                                                                                                                              A; Molecule t
A; Residues:
A; Cross-reformi
C; Superfami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Comment: The yellows.
C; Genetics:
A; Map position: segment RNA3
C; Superfamily: cucumber mosaic virus coat protein
C; Keywords: acetylated amino end; coat protein
F; 1/Modified site: acetylated amino end (Met) #st
                                                                                                                                                                                                                                                                                                                                                          RESUL'S
                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                            Query
Best I
Matche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                            860
LTD
                                                                  ches
                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Loca
                                                                                Match
Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                               type: mRNA
: 1-218 <HYO>
ferences: UNIPROT:Q66154; EMBL:X77855; I
ily: cucumber mosaic virus coat protein
                                                                 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MDKSESTSAGRNRR 14
                                                            100.0%;
Similarity 100.0%;
.4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
Similarity 100.0%;
L4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 100.0%;
Similarity 100.0%;
[4; Conservative (
MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                            MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                            MDKSESTSAGRNRR
                                                               <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 69; DB Pred. No. 3.6); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 69; DB 2;
Pred. No. 3.6e-05;
Mismatches 0;
                                                                Score 69; DB 2
Pred. No. 3.6e-
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single-stranded,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.6e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #status
                                                                                                                                                                                                                                               RNA4
                                                    2 05;
05;
                                                                                                                                            NID:945
                                                                                                                                                                                                                                                                                                        #text_change
                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 218;
                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                experimental
                                                                                                                                              7166;
                                                                                                                                                                                                                                            cucamber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                positive RNAs,
                                                                                               218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                PIDN: CAA5
                                                                                                                                                                                                                                                                                                             09-Jul-2004
                                                                                                                                                                                                                                            mogaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gape
                                                                                                                                                484
                                                                                                                                                                                                                                                virus-As
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 designated RNA1,
                                                                                                                                                σ
                                                                 ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <del>.</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>
                                                                                                                                                PID: 945716
                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                Kore
```

U

Thr

and

က္က

```
RESULT 8

JC6074

coat protein - cucumber mosaic viru
C; Species: cucumber mosaic virus, C
C; Date: 21-Jan-1997 #sequence_revis
C; Accession: JC6074
R; Huaping, L.; Hu, J.S.; Barry, K.;
Chinese J. Virol. 12, 235-242, 1996
A; Title: Coat protein gene sequence
A; Reference number: JC6073
A; Reference number: JC6073
A; Residues: 1-218 <HUA>
A; Residues: 1-218 <HUA>
A; Roses-references: UNIPROT:Q83257;
A; Cross-references: UNIPROT:Q83257;
A; Cross-references: train MM
A; Note: the authors translated the
C; Genetics:
A; Gene: cp
C; Superfamily: cucumber mosaic viru
C; Keywords: coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
$58039
capsid protein - cucumber mosaic vi:
C;Species: cucumber mosaic virus, C!
C;Species: cucumber mosaic virus, C!
C;Date: 13-Jan-1996 #sequence_revis:
C;Accession: $58039
R;Haq, Q.M.R.
submitted to the EMBL Data Library,
A;Reference number: $58039
A;Accession: $58039
A;Accession: $58039
A;Status: preliminary
A;Molecule type: DNA
A;Cross-references: UNIPROT:Q66157;
C;Superfamily: cucumber mosaic virus
RESULT 9
JC6073
Coat protein - cucumber mosaic virus (strain BS)
C;Species: cucumber mosaic virus, CMV
C;Species: cucumber mosaic virus, CMV
C;Date: 21-Jan-1997 #sequence_revision 21-Jan-1997 #text_change 09-Jul-2004
C;Accession: JC6073
R;Huaping, L.; Hu, J.S.; Barry, K.; Hweichung, F.
Chinese J. Virol. 12, 235-242, 1996
A;Title: Coat protein gene sequence analysis of three cucumber mosaic virus strains infe
A;Reference number: JC6073
A;Accession: JC6073
A;Acces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                र्
                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cross-references: UNIPROT:Q83257;
Experimental source: strain MM
Note: the authors translated the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 In 100.0%;
Similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
Similarity 100.0%;
4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR
||||||||||||
MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , K.;
1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u></u>,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 69; DB Pred. No. 3.6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 69; DB 2;
Pred. No. 3.6e-0;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hweichung,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL:X89652; coat protei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UNIPROT: 05525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-Mar-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-Jan-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2
3.6e-(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>3</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     য়
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        three
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
2-05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NID: 990261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ##
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UNIPROT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cucumbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9WAB3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIDN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ala
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
;:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAA61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UNIPROT: Q9YJR9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       strai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PID: g902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멂
```

```
Nucleic Acids Res. 18, 1332, 1990

A;Title: Corrigendum. Nucleotide sequence of the co. A;Title: Corrigendum. Nucleotide sequence of the co. A;Reference number: S09663; MUID:90206832; PMID:232. A;Recession: S09663

A;Recession: S09663

A;Residues: 1-218 <NOE>
A;Residues: 1-218 <NOE>
A;Residues: 1-218 <NOE>
A;Residues: 1-218 <NOE>
A;Rosel, M.J.T.; Tahar, S.B.
Nucleic Acids Res. 17, 10492, 1989
A;Title: Nucleotide sequence of the coat protein generation: S06932
A;Reference number: S06932; MUID:90098885; PMID:260. A;Accession: S06932
A;Roseidues: 1-6 'W' 8-44 'W' 46-51 'W' 53-56 'W' 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         coat protein
C;Species: cu
A;Variety: st
C;Date: 19-Ma
C;Accession:
R;Noel, M.J.T
Nucleic Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Note: the C; Genetics: A; Gene: cp C; Superfami C; Keywords:
J. Biochem.
A; Title: Mi
A; Reference
A; Contents:
C; Genetics:
        A;Reference number: JU0087; MUID:89279284; PMID:2732712
A;Accession: JA0136
A;Molecule type: genomic RNA
A;Residues: 1-218 <QUE>
A;Cross-references: UNIPROT:P21368; GB:D00462; NID:g222041;
R;Tsunasawa, S.; Narita, K.
J. Biochem. 92, 607-613, 1982
A;Title: Micro-identification of amino-terminal acetylamino
A;Reference number: A61297; MUID:83056735; PMID:6754709
A;Contents: annotation; acetylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
S09663
                                                                                                                                                                                            C;Species: cucumber mosaic virus (s
C;Species: cucumber mosaic virus, CMV
C;Date: 31-Dec-1993 #sequence_revision
C;Accession: JA0136
                                                                                                                                                                                                                                                            RESULT
JA0136
                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: mRNA
A;Residues: 1-6,'W',8-44,'W',46-51,'W',53-56,'W',58-68,'W',70,
A;Cross-references: EMBL:X16386
A;Experimental source: strain I17F
A;Note: this sequence has been revised in reference S09663
C:Superfamily: cucumber mosaic virus coat protein
                                                                                                                                          R;Quemada, H.; Kearney, C.; Gonsalves, D.; Slightom, J.I J. Gen. Virol. 70, 1065-1073, 1989
A;Title: Nucleotide sequences of the coat protein genes A;Reference number: JU0087; MUID:89279284; PMID:2732712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Best L
Matche
                                                                                                                                                                                                                                                                                                                                                                          Query N
Best Lo
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                           Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                          11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mat
                                                                                                                                                                                                                                                                                                                                                                                                         Mat
                                                                                                                                                                                                                                                                                                                                                                            \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J.T.; Tahar, S.B
ids Res. 18, 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ily: cucumber |
coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ch
                                                                                                                                                                                                                                                                                                                                                                                                          C<sub>D</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    n - cucumber mosaic vicucumber mosaic virus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14;
                                                                                                                                                                                                                                                                                                                                                                            14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   authors
                                                                                                                                                                                                                                                                                                                                                μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1r-1997 #sequence_revision 19-Mar-1997
S09663; S06932
                                                                                                                                                                                                                                                                                                                                                                         1 100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
Similarity 100.0%;
.4; Conservative
                                                                                                                                                                                                                                                                                                                                                 MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      er mosaic
I17F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       virus
us, CMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                            o
;-
                                                                                                                                                                                                                                                                                                                                                                                       Score 69;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon
                                                                                                                                                                                                                                               (strain C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           coat
                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                    31-Dec-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69;
                                                                                                                                                                                                                                                                                                                                                                                                      69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                         DB 2; L
3.6e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I17F)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2;
ce-05;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 gene a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                reference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    coat protein
2320436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #text
                                                                                                                                                                                                                    #text
                                                                                                                                                                                        J.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                         Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                           and
                                                                                                                                                                                                                 _chan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S06932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     as
                                             acids
                                                                                      PIDN: BAA00357.1;
                                                                                                                                                           flanking
                                                                                                                                                                                                                 ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'W',72-
                                                                                                                                                                                                                    -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-Jul-200
                                                                                                                                                                                                                                                                                                                                                                           <u></u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                             בֹב
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and
                                           proteins
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73,'W',
                                                                                                                                                           regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 flanking regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75-
                                                                                     PID: 9222042
                                                                                                                                                            0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    residue
                                                                                                                                                           cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ጟ
```

```
RESULT 13
T21432
hypothetical protein F26H11.2
C;Species: Caenorhabditis eleg
C;Date: 15-Oct-1999 #sequence
C;Accession: T21432
R;Barlow, K.
submitted to the EMBL Data Lib
A;Reference number: Z19421
A;Accession: T21432
A;Status: preliminary; transla
A;Molecule type: DNA
A;Cross-references: UNIPROT:O4
A;Experimental source: clone F
C;Genetics:
A;Gene: CESP:F26H11.2
A;Introns: 56/3; 154/2; 373/2;
                                                                                                                                                                                                                                                                                                                                      Coat protein - cucumber mosaic virus (strain I N;Alternate names: capsid protein C;Species: cucumber mosaic virus, CMV C;Date: 03-Aug-1998 #sequence_revision 03-Aug-C;Accession: D71392 R;McGarvey, P.; Tousignant, M.; Geletka, L.; CJ. Gen. Virol. 76, 2257-2270, 1995 A;Title: The complete sequence of a cucumber m A;Reference number: A71392; MUID:96005047; PMI A;Accession: D71392 A;Molecule type: mRNA A;Residues: 1-218 <MCG>A;Cross-references: UNIPROT:Q66120; GB:U20219; A;Experimental source: strain Ixora C;Comment: The CMV genome consists of three sp C;Comment: The Ixora strain in unusual in that ptoms found when replicated by other CMV strain C;Superfamily: cucumber mosaic virus coat protein F;1/Modified site: acetylated amino end; Coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Map position: segment knas
C;Superfamily: cucumber mosaic virus coat protein
C;Keywords: acetylated amino end; coat protein; glycoprotein
C;Keywords: acetylated amino end (Met) #status experimental
F;1/Modified site: acetylated amino end (Mot) #status predicted
F;43/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                  Query I
Best Lo
Matcher
        Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                            Match
Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mato
                                                                                                                                                                                                                                                                                                    Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C
L
                                                                                                                                                                                                                                                                                                  13 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13;
                                                                                                                                                                                                                                                           --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \vdash
  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                  92.8
Similarity 92.9
3; Conservative
                                                                                                                                                                                                                                                           MDKSES
           imi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92.8%;
imilarity 92.9%;
; Conservative
 ٠.
 ilarity
Conserva
                                                                                                                                                                                                                                                           SESTSAGRNRR
                                                                                [PROT:O
 59.
69.
7ative
                                                                                                                         ransl
                                        73/2;
                                                                                                                                                       Lib
                                                                                                                                                                                    .2 - Ca
legans
ce_rev:
         244
                                                                                                                                                                                                                                                                              14
                                                                                 A (E
                                                                                                                         at
                                                                                                                                                                                                                                                            \vdash
                                                                                                                                                                                                                                                                                                            မှာ ထ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                      ra
                                                                                                                                                                                                                                                                                                            * *
                                                                                                                                                                                                                                                                                                                                         virus coat protein
nd; coat protein
amino end (Met)/#st
                                                                                 NW
                                         41
                                                                                409
6H1
                                                                                                                                                                                     evi.
                                                                                                                         e
Q
                                                                                                                                                     Ş
                                                                                                                                                                                                       Caenorhabditis
                                       .7/3;
Score 41; DB Pred. No. 42; 1; Mismatches
                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                      .
B.
                                                                                                                                                                                                                                                                                                  Score 64; DB 2;
Pred. Nd._0'.0003
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 64; DB 1;
Pred. No. 0.0003;
); Mismatches
                                                                                          TEMBL
                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                  GB: U20219; NID: g1161916;
                                                                                                                         O<sub>3</sub>
                                                                                                                                                       November
                                        ហ
                                                                                                                                                                                     15
                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-Aug-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rain
                                                                                                                         Ш
                                                                                                                                                                                                                                                                                                                                                                                           ree species
n that it o
strains.
                                                                                                                                                                              -0ct
                                        /2;
                                                                                                                       /EMBL/DD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           er mosaio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٠.
                                                                                                                                                       19
                                        596/1;
                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cellini,
                                                                                                                                                                                                                                                                                                                                        ∥#sta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ixora)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998
                                                                                                                                                                                     199
 ∞ ~•
                   Œ
                                                                                                                                                                                                        elegans
                    N
                                                                                          PIDN:
                                                                                                                                                                                     φ
                                                                                                                                                                                                                                                                                                                                                                                                      does
does
                                                                                                                                                                                                                                                                                                                                          tug
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ው ወ
                                                                                                                                                                                     #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #text
 w
                                                                                                                                                                                                                                                                                                                      Len
                                        703
                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                     ext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
[1]
                                                                                                                                                                                                                                                                                                                                          D
                                                                                          CAB04
                                                                                                                                                                                                                                                                                                                                                                                                    single-str
                                                                                                                                                                                                                                                                                                                     lgth
                                                                                                                                                                                                                                                                                                                                          redic
                                       /2;
                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _change
                                                                                                                                                                                   change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      from
 18
                                        847/3
                                                                                                                                                                                                                                                                                                                      218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ıper,
                                                                                           97
                                                                                                                                                                                                                                                                                                                                                                                                                                   PIDN: AAC54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ixora
                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                      rand.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                 °
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                          S
                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -Jul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
3
                                                                                          PDB:
                                         N
 Ga
                                                                                                                                                                                                                                                                                                  Ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      u
                                        /3
                                                                                                                                                                                                                                                                                                                                                                                                     i, capped,
several wel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hat
                                                                                                                                                                                                                                                                                                  Ð
                                                                                                                                                                                                                                                                                                                                                                                                                                    619
                                                                                                                                                                                                                                                                                                  Ö
                                                                                          GN000
                                        034
                                                                                                                                                                                                                                                                                                                                                                                                                                   1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
0,
                                        /2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      de
                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                     IJ:
                                                                                                                                                                                                                                                                                                                                                                                                       ğÜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      icient
                                                                                         CESP:
                                        .078/2
                                                                                                                                                                                                                                                                                                                                                                                                      sitivo
chara
                                                                                                                                                                                                                                                                                                                                                                                                                                  g1161
```

Search com Job time :

весв

December

ຫ •

2004,

08:05:50

```
RESULT 15
B83765
B83765
hypothetical protein BH0922 [imported] - Bacillus haloquians
C; Species: Bacillus halodurans
C; Species: Bacillus halodurans
C; Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 09-(
C; Accession: B83765
R; Takami, H.; Nakasone, K.; Takaki, Y.; Maeno, G.; Sasaki, R.; Masu
Nucleic Acids Res. 28, 4317-4331, 2000
A; Title: Complete genome sequence of the alkaliphilic bacterium Bac
A; Reference number: A83650; MUID:20512582; PMID:11058132
A; Accession: B83765
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-38 < STO>
A; Cross-references: UNIPROT:Q9KED1; GB:AP001510; GB:BA000004; NID:
C; Genetics:
A; Gene: BH0922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
T31422
C-terminal domain-binding protein rA9 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C;Accession: T31422
R;Yuryev, A.; Patturajan, M.; Litingtung, Y.; Joshi, R.V.; Gentile, C.; Gebara, M.; Corde Proc. Natl. Acad. Sci. U.S.A. 93, 6975-6980, 1996
A;Title: The C-terminal domain of the largest subunit of RNA polymerase II interacts with A;Reference number: Z21024; MUID:96293459; PMID:8692929
A;Accession: T31422
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-1473 <YUN>
A;Residues: 1-1473 <YUN>
A;Experimental source: hippocampus
밁
                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Ma
Best Loc
Matches
                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                      55.1%;
Similarity 53.8%;
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         similarity 57.1%;
8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDKSESTSAGRNR 13
MDKKQRMAEGRNR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDKKESMTRSRERR 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                    2
                                                                      Score 38; DB 2
Pred. No. 3.5;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 39; DB Pred. No. 85; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacillus halodurans (strain C-125)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ν
••
                                                                                                                                                                                                        GB:BA000004; NID:g10173440;
                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ທ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1473;
                                                                                                                                                                                                                                                                                                                                                           R.; Masui,
                                                                                                                                                                                                                                                                                                                          Bacillus halodurans
                                                                                                                                                                                                                                                                                                                                                                                                  09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                        <u>.</u>
                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                          N.; Fuji,
                                                                                                                                                                                                           PIDN: BAB046:
                                                                         <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          •
                                                                                                                                                                                                                                                                                                                                                          'ম
:
                                                                                                                                                                                                                                                                                                                        and ç
```

Ġ

S

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                                                                                                                                                         Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        중
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post
                                                                                                                                                                                                                                                                                                                                                                                                                      Databa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ea
                                                                                                                                                                                                                                                                                                              Sult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92:
    proces
                                                                                                                                                                                                                                                                                                                                                             Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dmund
                                                                                                                                                                                                                                                                                                                                                                                                                       \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Œ
                                                                                                                                                                                                                                                                                                                                                                                                                       \mathbf{o}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ab1
                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                Ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ወ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq
seq
                                                                                                                                                                                                                                                                                                                                                              Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                           sing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            н
                                                                                                                                                                                                                                                                                                                                                             No. is th greater t
    ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            O
F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        us-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM6:
                                                                                                                                                                                                                                                                                                       Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hits
   1000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
11000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
10000
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1825181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     December
                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                    uni
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Copyright
                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                 iProt_02:*
uniprot_sprot:*
uniprot_trembl:*
    than
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000000000
                                                                                                                                                                                                                                                                                                                                                                                 numbe
                                                                                                                                                                                                                                                                                                                 Ō
                                                                                                                                                                                                                                                                                                                                                              n or equal
analysis o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7-
                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
Match
first
    迈
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           fying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapext
                                                                                                                                                                                                                                                                                                                                                                                 of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
    0%
100%
45 gi
                                                                                                                                                                                                                                                                                                                                                     ofo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
 Q6T7D4
Q66133
Q8QTA0
AAR89478
COAT_CMVAS
COAT_CMVC7
COAT_CMVC7
COAT_CMVFT
COAT_CMVFT
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVV
O89125
Q6Q4B0
Q6G71E2
Q6Q1B0
Q6G01R4
Q6U1R5
Q6U1R5
Q6U1R5
Q6U1718
                                                                                                                                                                                                                                                                                                                                                                                re
                                                                                                                                                                                                                                                                                                             ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74
                                                                                                                                                                                                                                                                                                                                                                                                                                          summari
                                                                                                                                                                                                                                                                                                                                                             esults
the t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :59:17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          parameters
                                                                                                                                                                                                                                                                                                                                                             s predice score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              residue
                                                                                                                                                                                                                                                                                                                                                                                                                                          es
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (wi
88.
                                                                                                                                                                                                                                                                                                                                                                                                                                           A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.1.6
Compuge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search time 91 Se
thout alignments)
519 Million cell
                                                                                                                                                                                                                                                                                                                                                         cted by chance to have of the result being score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₿
Q6t7d4 cucumber mo
Q66133 cucumber mo
Q8qta0 banana mosa
Aar89478 cucumber mo
Q66154 cucumber mo
Q66135 cucumber mo
Q66143 cucumber mo
Q66140 cucumber mo
Q66141 cucumber mo
Q66140 cucumber mo
Q83271 cucumber mo
Q83269 cucumber mo
Q83269 cucumber mo
Q66138 cucumber mo
Q66138 cucumber mo
Q66138 cucumber mo
Q60261 cucumber mo
Q16489 cucumber mo
Q16489 cucumber mo
Q60261 cucumber mo
Q60261 cucumber mo
Q6044b0 cucumber mo
Q604712 cucumber mo
Q604712 cucumber mo
Q604119 cucumber mo
Q604119 cucumber mo
Q601176 cucumber mo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      econd
                                                                                                                                                                                                                                                                                                                O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   updates/sec
                                                                                                                                                                                                                                                                                                               ript
                                                                                                                                                                                                                                                                                                                                                                      ve a
printed,
                                                                                                                                                                                                                                                                                                                9
```

א סור כי טיט טיט טיט א גא גא גא גא	Db Qy	S X R R R R R R R R R R R R R R R R R R	
RESULT 2 Q66133 ID Q6613 AC Q6613 DT 01-NC DT 01-NC DT Coat Cucum OC Cucum OC Cucum OC RN [1] RN [1] RN [1] RN Reich RA Reich RT aisla	Query Best I Matche	SULT T7D4 OSC CC CC OSC PH H GC CC CC OSC OSC OSC OSC OSC OSC OSC OSC	25000000000000000000000000000000000000
PRELIMINARY; PRT; 217 AA.  6133; -NOV-1996 (TrEMBLrel. 01, Created) -NOV-1996 (TrEMBLrel. 01, Last sequence update) -OCT-2003 (TrEMBLrel. 25, Last annotation update) at protein.  cumber mosaic virus (cucumber mosaic cucumovirus).  ruses; ssRNA positive-strand viruses, no DNA stage; Br.  cumovirus.  BI_TaxID=12305;  QUENCE FROM N.A.  ichel H., Marino L., Kummert J., Belalcazar S., Narvae aracterizacion del gen de la proteina de la capside de slamientos del virus del mosaico del pepino (CMV), obtatano y banano (Musa spp.).";	100.0%; Score 69; DB 2; Length 21 Local Similarity 100.0%; Pred. No. 0.00013; nes 14; Conservative 0; Mismatches 0; Indels 1 MDKSESTSAGRNRR 14	PRELIMINARY; PRT; 217 AA.  177D4; 177	69 100.0 218 2 Q76U37 69 100.0 218 2 Q7TDD9 69 100.0 218 2 Q7TDD9 69 100.0 218 2 Q7TDV0 69 100.0 218 2 Q7THU8 69 100.0 218 2 Q66131 69 100.0 218 2 Q66132 69 100.0 218 2 Q66155 69 100.0 218 2 Q66157 69 100.0 218 2 Q63257 69 100.0 218 2 Q83259 69 100.0 218 2 Q83259 69 100.0 218 2 Q83260 69 100.0 218 2 Q83260 69 100.0 218 2 Q83260 69 100.0 218 2 Q83280 69 100.0 218 2 Q83280 69 100.0 218 2 Q83280 69 100.0 218 2 Q83260 69 100.0 218 2 Q83260 69 100.0 218 2 Q83280
omoviridae; comoviridae; dos enidos de	7; 0; Gaps	Bromoviridae;	dd9 cucumber mo dv0 cucumber mo hu8 cucumber mo 131 cucumber mo 155 cucumber mo 257 cucumber mo 258 cucumber mo 260 cucumber mo jk5 cucumber mo jk5 cucumber mo jk5 cucumber mo

0

```
RESULT 4
AAR89478
ID AAR89478;
AC AAR89478;
DT 02-MAR-2004 (T
DT 02-MAR-2004 (T
DT 02-MAR-2004 (T
DT 02-MAR-2004 (T
DE Coat protein.
OS Cucumber mosai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOUR DESCRIPTION OF THE PROPERTY OF THE PROPER
                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RA DR DR DR DR RA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Revista Corpoica 1:1-5(1996).
[2]

SEQUENCE FROM N.A.

Marino-Ramirez L.;

Submitted (JUL-1995) to the EMBL/GenBanl

EMBL; U32859; AAB50176.1; -.

PIR; JC6073; JC6073.

PIR; JC6075; JC6075.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0005198; F:structural molecule ac

InterPro; IPR000247; Cucumovirus coat.

InterPro; IPR008975; Viral cap_coat.

Pfam; PF00760; Cucumo_coat; 1.

PRINTS; PR00222; CUCUMOCOAT.

ProDom; PD001284; Cucumovirus_coat; 1.

Coat protein.

SEQUENCE 217 AA; 24015 MW; 725187E6
                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                              h 100. Similarity 100. 14; Conservative
                                                                                                                                                                                                                                                                                                                                                   \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \mathbf{P}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                                                                                                                                  MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
; Conserv
                            mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --
                                                                     (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                             PR
                                                                                                                                                                            ELIMINARY
                            virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rvat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
100.0%;
                            (cucumber
                                                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                            N N N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                      .0*
                                                                        7,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                       Create
Last so
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                 Score 69; DE Pred. No. 0.0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 69; DE Pred. No. 0.0
                                                                                                                                                                             PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7251B7E671
                            mosaic
                                                                        sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence update)
annotation update)
                                                                                                                          Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 805
                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       activi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \boldsymbol{\omega}
                          cucumovirus)
                                                                                                                                                                             J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xiaodong D., sion Vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctivity;
                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
0.00013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
0.00013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7D3B3AE
                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92DCAB
                                                                       update)
on update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .ty;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                databas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ** **
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64
                                                                           <u>e</u>)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inde1s
                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for the E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               z.;
}anana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

RESULT 6
COAT\_CMVBA
ID COAT\_C
AC Q66135

CMVBA

STANDARD;

PRT;

```
RESULT 5
COAT_CMVAS
ID COAT_CMVAS
AC Q66154;
DT 15-DEC-1998
DT 15-DEC-1998
DT 15-DEC-1998
Coat protein
Cucumber moss
Cucumber moss
Cucumovirus.
NCBI_TaxID=117
[1]
SEQUENCE FROM 1
Hyon S., Park 1
Submitted (FEB--i- SIMILARITY-
fami).
                                                                                       SO REAL BRANKS
멍
                    $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                          Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Viruses; ss
Cucumovirus
NCBI_TaxID=
[1]
SEQUENCE FR
SEQUENCE FR
STRAIN=CS;
Yan L., Xu
"Complete n
RNA3.";
Submitted (
EMBL; AY429
Coat protei
SEQUENCE
                                                                                      EMBL; X7
PIR; S42
InterPro
InterPro
Pfam; PF
PRINTS;
ProDom;
Coat pro
SEQUENCE
                                                                                                                                                                                                     This sbetwee the Eumodificentiti
                                                                                                                                                                                          is SWISS-PROT entry is copyright. It is produced through a collaboration tween the Swiss Institute of Bioinformatics and the EMBL outstation - e European Bioinformatics Institute. There are no restrictions on its e by non-profit institutions as long as its content is in no way dified and this statement is not removed. Usage by and for commercial titles requires a license agreement (See http://www.isb-sib.ch/announce/send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                             L; X77855; CAA54846.1; -.; S42098; S42098.
erPro; IPR000247; Cucumovirus_coat.
erPro; IPR008975; Viral_cap_coat.
m; PF00760; Cucumo_coat; 1.
NTS; PR00222; CUCUMOCOAT.
Dom; PD001284; Cucumovirus_coat; 1.
                                                                                    protein.
NCE 218 AA;
                                                                                                                                                                                                                                                                                                      NCE FROM N.A.
S., Park Y.I.;
tted (FEB-1994) to the EMBL/GenBank/DDBJ databases.
IMILARITY: Belongs to the cucumoviruses/bromoviruses coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           es; ssRNA positive-strand viruses, ovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                 raxID=117118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ., Xu Z., Goldbach R., Chen
lete nucleotide sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                raxID=12305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ted (OCT-2003) to the AY429437; AAR89478.1;
                                            Similarity
14; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
Similarity 100.0%;
L4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                   998 (Rel. 37, Created)
998 (Rel. 37, Last sequence update)
998 (Rel. 37, Last annotation update)
998 (Capsid protein) (CP).
mosaic virus (strain As) (CMV).
ssrNA positive-strand viruses, no DN
MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   217 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24015 MW;
                                                                                        24044 MW;
                                            100.0%;
100.0%;
tive 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                             <u></u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ databases
                                           Score 69; DB 1;
Pred. No. 0.00013;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
                                                                                                               coat; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                          E6BEC2E3D4CD73EF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32D0035B4F20E891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                         coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        K., Prins M.;
cucumber mosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 69; DB 2; L
. No. 0.00013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     218 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mosaic
                                                                                                                                                                                                                                                                                                                                                                                      DNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                   Length 218;
                                                                                          CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                       Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <del>හ</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           isolate)
                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                          protein
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                              0
```

```
Query
Best I
Matche
                                                                                                                                                                                            COAT CMVC7 STANDARD; PRT; 218 040983; 15-DEC-1998 (Rel. 37, Created) 15-DEC-1998 (Rel. 37, Last sequence updated) 15-DEC-1998 (Rel. 37, Last annotation updated) (Coat protein (Capsid protein) (CP). Cucumber mosaic virus (strain C7-2) (CM) Viruses; ssRNA positive-strand viruses,
                                                                                                                                                                                                                                                                                                                                                                                             EMBL; U43888; AAA87044.1; -.
InterPro; IPR000247; Cucumovirus_c
InterPro; IPR008975; Viral_cap_coa
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat
Coat protein.
SEQUENCE 218 AA; 24174 MW; 9EB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumovirus.

NCBI_TaxID=117120;
[1]

SEQUENCE FROM N.A.

Gafny R., Wexler A.,

"Natural infection of cucumber mosaic virus Phytoparasitica 24:49
-!- SIMILARITY: Belon
                                               This SWISS between the Europe
                                                                                          Cucumovirus.

NCBI_TaxID=117117;

[1]

SEQUENCE FROM N.A.

Chaumpluk P., Sasaki Y., Nakajima N., Nagano H., Nakamus Suzuki K., Mise K., Inouye N., Okuno T., Furusawa I.;

"Six new subgroup I members of Japanese cucumber mosaic determined by nucleotide sequence analysis on RNA3's cDI Ann. Phytopathol. Soc. Jpn. 62:40-44(1996).

-!- SIMILARITY: Belongs to the cucumoviruses/bromoviruse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence upd
15-DEC-1998 (Rel. 37, Last annotation u
Coat protein (Capsid protein) (CP).
Cucumber mosaic virus (strain Banana) (
Viruses; ssRNA positive-strand viruses,
                           modified
                                                                                                                                                                                                                                                                                                                                                              ches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produce between the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There are use by non-profit institutions as long as its modified and this statement is not removed. Usas entities requires a license agreement (See http:, or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                               CMVC7
        ent
or
                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                Match
         ities
send a
                         s SWISS-PROT entry is copyright. It is produced through a ween the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content is ified and this statement is not removed. Usage by and for the statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          m O
                                                                                      family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amily
                                                                                                                                                                                                                                                                                                                                                             Similarity 14; Conser
                                                                                                                                                                                                                                                                                                                      MDKSESTSAGRNRR
         requires
an email t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ion of ban
virus.";
24:49-56(
Belongs t
                                                                                                                                                                                                                                                                                                                                                              rvat
         Ö p
         license
license@
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mawassi
f banana
                                                                                                                                                                                                                                                                                                                                                            100.0%;
100.0%;
tive (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ö
                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (199)
to t)
         se agreement se@isb-sib.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   he 6)
                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               λ
Σ.
                                                                                                                                                                                                                                                                                                                                                             Score 69,
Pred. No.
Mismato
                                                                                                                                                                                                                                                                                                                                                                                                                                                rus_coat.
                                                                                                                                                                                                                                                                                                                                                                                                                       coat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cucumoviruses/bromoviruses
                                                                                                                                                                                                                                                                                                                                                                                                   9EB4FCB212A21223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               era
eat
                    as long
removed.
ent (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
on update)
                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                       update
                                                                                                                                                                                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                            (CMV)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0 0
                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                       218
                                                                                                                                                                                                                                                                                                                                                             9; DB 1; I
o. 0.00013;
tches 0;
                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CMV)
                    (See
                                                                                                                                                                                                 no.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 –-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                       AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TH H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ba
con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Usage by anctp://www.isb-
                     Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ced through
                                                                                                                                                                                                 stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -Jos
aini
                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                    CRC64
                                                                                                                                                Nakamura
                    /www
                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ng :
                                                                                                                    CDNA8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 restrictions
                                                                                                                                                                                                  Bromoviridae
                    isb-sib.
                                               restrictions
                                                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                œ
                                                                                                 ወ
                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŭΖ
                                                                                                 \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   coat
                                                                                                                      rus,
                                                                                                                                                 Ħ.
                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            is ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ם
                                                                                                 oat
                           for
                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            collaboration -
                                                                   col
                                              collaboration outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
                                                                                                                              ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prot
                                                                                                Q
                                                                                                                               œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              commercial
                                                                                                                                                                                                                                                                                                                                                              Gap
                            commerci
                                                                                                 rot
                    'announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         go
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                       no
                                                                                                 Ò
                                                                                                                                                                                                                                                                                                                                                               ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        way
                            way
ial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   its
                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT 9
COAT_CMVFC
ID COAT_C
AC Q00259
DT 01-DEC
DT 01-DEC
DT 15-DEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
COAT_CN
ID CC
AC QC
DT 15
DT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SQ SQ
                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                        Query Ma
Best Loo
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; D42079; BAA07675.1; -.
InterPro; IPR000247; Cucumovirus_c
InterPro; IPR008975; Viral_cap_coa
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat
Coat protein.
SEQUENCE 218 AA; 24033 MW; 16D
                                                                                                                                                                                                                                                                                                                                                                          EMBL; D28489; BAA05851.1; -.
InterPro; IPR000247; Cucumovii
InterPro; IPR008975; Viral_cal
Pfam; PF00760; Cucumo_coat; 1
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_Coat protein.
SEQUENCE 218 AA; 24157 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CMVCS
COAT_CMVCS
COAT_CMVCS
COAT_CMVCS
STAN
Q66143;
15-DEC-1998 (Rel. 3
15-DEC-1998 (Rel. 3
15-DEC-1998 (Rel. 3
Coat protein (Capsic Cucumber mosaic vir Viruses; ssRNA posicucumovirus.
NCBI_TaxID=117109;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
Chaumpluk P., Sasaki Y., Nakajima N., Nagano H., Nakamur Chaumpluk P., Sasaki Y., Nakajima N., Nagano H., Nakamur Suzuki K., Mise K., Inouye N., Okuno T., Furusawa I.;
"Six new subgroup I members of Japanese cucumber mosaic determined by nucleotide sequence analysis on RNA3's cDN Ann. Phytopathol. Soc. Jpn. 62:40-44(1996).
Ann. Phytopathol. Soc. Jpn. 62:40-44(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWI between the Euro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use | modif:
entit:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stween the Swiss Institute of Bioinformatics and the EMBL outstation be European Bioinformatics Institute. There are no restrictions on its diffied and this statement is not removed. Usage by and for commercial states requires a license agreement (See http://www.isb-sib.ch/announce/send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                               Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mat
                                                                                                                                                                                                                                                                                                                                  Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EC-1998 (Rel. 37, Created)
EC-1998 (Rel. 37, Last sequence update)
EC-1998 (Rel. 37, Last annotation update)
protein (Capsid protein) (CP).
mber mosaic virus (strain CS) (CMV).
ses; ssRNA positive-strand viruses, no DN
 C-1992
C-1998
C-1998
                                                                                         CMVFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ro; IPR000247; Cucumovirus
ro; IPR008975; Viral_cap_copert; 1.
                                                                                                                                                                                                                                                                                                                                    Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
| Similarity 100.0%;
| 14; Conservative 0
                                                                                                                                                                                                                                                                                           14;
                                                                                                                                                                                                                                                                                    100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDKSESTSAGRNRR
                                                                                                                                                                                                                            MDKSESTSAGRNRR
                                                                                                                                                                                                     MDKSESTSAGRNRR 14
 (Rel. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                           Cucumovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cucumovirus_coat;
  24,
24,
37,
 Created)
Last sequence Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                              ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            l_cap_coat.
t; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l_cap_coat.
  sequence update)
annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 69; DB 1;
Pred. No. 0.00013;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                           coat;
                                                                                                                                                                                                                                                                                         Score 69; DB 1;
Pred. No. 0.00013;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cucumoviruses/bromoviruses coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16D96022D1A26FD8
                                                                                                                                                                                                                                                                                                                                                                                  76F6BDCD9628F683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                              ⊢•
                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              no DNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nakamura
                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bromoviridae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C virus
                                                                                                                                                                                                                                                                                                                                        218
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

BOOK OF SHEET SHEE

update)

ali 🖛 🛊 e

· "Breddiges (ma)

```
맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Ma
Best Loc
Matches
                                                                                                                                                                                                            Cucumovirus.

NCBI TaxID=117112;
[1]

SEQUENCE FROM N.A.

Chaumpluk P., Sasaki Y., Nakajima N., Nagano H., Nakamura Suzuki K., Mise K., Inouye N., Okuno T., Furusawa I.;

"Six new subgroup I members of Japanese cucumber mosaic v determined by nucleotide sequence analysis on RNA3's cDNA Ann. Phytopathol. Soc. Jpn. 62:40-44(1996).

-I- SIMILARITY: Belongs to the cucumoviruses/bromoviruses family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                reveal a single amino acid c induction.";
J. Gen. Virol. 72:2587-2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; D10544; BAA01403.1; -.
PIR; JQ1253; JQ1253.
InterPro; IPR000247; Cucumoviru
InterPro; IPR008975; Viral_cap_
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat protein.
SEQUENCE 218 AA; 24130 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cucumovirus.
NCBI_TaxID=31717;
[1]
SEQUENCE FROM N.A
MEDLINE=92013983;
Shintaku M.;
"Coat_protein_gen
                                                                                                                                                                                                                                                                                                                                                                                                            COAT CMVFT
Q66140;
15-DEC-1998 ()
15-DEC-1998 ()
15-DEC-1998 ()
Coat protein
Cucumber mosa
Viruses; ssRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Coat prot
Cucumber
Viruses;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                  EMBL; InterPi
                                                                  This SWISS-PROT entry is copyright. It is produced through a coptween the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CMVFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mat
                   ď
                                      D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CE FROM N.A.
E=92013983; 1
                                                                                                                                                                                                                                                                                                                                                                                                           1998 (Rel. 37, Created)
1998 (Rel. 37, Last sequence updat
1998 (Rel. 37, Last annotation upd
cotein (Capsid protein) (CP).
er mosaic virus (strain FT) (CMV).
es ssRNA positive-strand viruses, n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Simi
14;
                                    284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDKSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cein (Capsid protein) (CP).
mosaic virus (strain FC) (CMV)
ssRNA positive-strand viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDKS
                87; BAA05847.1
IPR000247; Cuc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
larity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>تن</u> —
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumovirus_cc
Viral_cap_coat
no_coat; 1.
                   Cucumovi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     es of tw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            )534;
                   Bur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C4B7CFB1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  coat
                   coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         corre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cucumber m
orrelating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    upda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                pdate)
update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.00013;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   no
O
                                                                                                                                                                                                                                                                                                                                                                                                                   no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F2A7CAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            مبع
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
g with c
                                                                                                                                                                                                                                                                                                                                                                                                               stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                                                                                                                        Nakamura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /www.isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chlorosi
                                                                                                                                                                                                                                                                                        Baic
                                                                                                                                                                                                                                                                     CDNAs.
                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bromoviridae
                                                                                                                                                                                                                                                                                                                                                                                                                   Bromoviridae
                                                                                                                                          restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                   Ð
                                                                                                                                                                                                                                                                   virus
NAs.";
                                                                                                                                                                                                                                  \boldsymbol{\omega}
                                                                                      is in the state of the state of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۳. œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ig
for
                                                                                                                                                                                                                                oat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a t
                                                                                                                                         a collaboration
BL outstation -
ictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ×.
                                                                                                                                                                                                                                                                                        96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch/announc
                                                                                                                                                                                                                                  ם
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Comm
                                                                                                        Comm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                   rot
                                                                                         announc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                          9
                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ဋ
                                                                                                        erci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              way
rcial
                                                                                            way
;ial
|ce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                         Œ
```

```
ERRATUM.

ERRATUM.

MEDLINE=9020683.,

A Noel M.J.T., Ben Taha.

AL Nucleic Acids Res. 18:1332-.

RN [3]

RP SEQUENCE FROM N.A.

STRAIN=FNY;

RX Owen J., Shintaku M., Aeschleman P., Tahar S., Paluka.

RT "Nucleotide sequence and evolutionary relationships of virus (CMV) strains: CMV RNA 3.";

J. Gen. Virol. 71:2243-2249(1990).

-i- SIMILARITY: Belongs to the cucumoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromoviruses/bromovi
    SORBOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query N
Best Lo
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AT CMVII

AT CMVII

COAT CMVII STANDARD; PRT; 218 AA.

P14767;

01-APR-1990 (Rel. 14, Created)

01-APR-1990 (Rel. 14, Last sequence update)

15-DEC-1998 (Rel. 37, Last annotation update)

Coat protein (Capsid protein) (CP).

Cucumber mosaic virus (strain I17F) (CMV), and

Cucumber mosaic virus (strain FNY) (CMV).

Viruses; ssRNA positive-strand viruses, no DNA stage; Brocumovirus.

NCBI_TaxID=12308, 12307;

[1]

SEQUENCE FROM N.A.

STRAIN=I17F;

MEDLINE=9009885; PubMed=2602158;

Noel M.J.T., Ben Tahar S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=117F;

MEDLINE=90098885; PubMed=
Noel M.J.T., Ben Tahar S.
"Nucleotide sequence of to
cucumber mosaic virus (CM)
Nucleic Acids Res. 17:104
                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
EMBL;
EMBL;
PIR; S
InterP
InterP
Pfam;
PRINTS
PRODOM
Coat p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR008975; Viral_cap_coat.
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat;
Coat protein.
SEQUENCE 218 AA; 24160 MW; 5D3B9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \boldsymbol{\omega}
                             erPro; IPR000247; Cucumovirus coat.
erPro; IPR008975; Viral cap_coat.
n; PF00760; Cucumo_coat; 1.
ITS; PR00222; CUCUMOCOAT.
  protein.
NCE 21
                                                                                                                                                   X16386; CAA34422.1;
D10538; BAA01397.1;
09663; S09663.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 100.0%;
Similarity 100.0%;
L4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MDKSESTSAGRNRR
     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                        Belongs to the cucumoviruses/bromoviruses coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ce of the coat protein
rus (CMV) strain I17F.'
17:10492-10492(1989).
     24140
   ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>o</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 69; DB 1;
Pred. No. 0.00013;
                                               coat; 1.
    C4B4FCB21F197F98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5D3B98298EEA3997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
';
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Palukaitis P.
hips of cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cucumber mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

Que

Мa

C C

00.0%;

Score

69

BB

<u>ب</u>

Length

218;

Loca

S

00

0%;

Pred.

0

```
SON DESCRIPTION OF THE SULT OF
    CC RA
                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                 Que
Bes
Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bes
Mat
                                                                                                               YULT 13
YT CMVKO
STANDARD; PRT; 218
COAT CMVKO STANDARD; PRT; 218
Q83269;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence upda
15-DEC-1998 (Rel. 37, Last annotation up
Coat protein (Capsid protein) (CP).
Cucumber mosaic virus (strain Kor) (CMV)
Viruses; serna positive-strand viruses,
Cucumovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; D16405; BAA03889.1; -.
InterPro; IPR000247; Cucumovirus_c
InterPro; IPR008975; Viral_cap_coa
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat
Coat protein.
SEQUENCE 218 AA; 24144 MW; 087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ULT 12
T_CMVII
COAT_CMVII STANDARD;
Q83271;
15-DEC-1998 (Rel. 37, Last s
15-DEC-1998 (Rel. 37, Last s
15-DEC-1998 (Rel. 37, Last a
Coat protein (Capsid protein
Cucumber mosaic virus (strai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucumovirus.
NCBI_TaxID=117113;
[1]
SEQUENCE FROM N.A.
[1]
SEQUENCE FROM N.
Kim S.J., Cho H.
Paek K.H.;
Submitted (SEP-1
-1- SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Karasawa A., Ito A., Okada I., Hase S., Ehara Y.;
"A possible role of RNA 2 of cucumber mosaic cucumoviru determinant of infection phenotype on cowpea.";
Ann. Phytopathol. Soc. Jpn. 63:289-297(1997).
-!- SIMILARITY: Belongs to the cucumoviruses/bromoviruse family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             che
                                                                                                                                                                                                                                                                                                                                                                                                 Che
L
Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a coptween the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                     NCBI
                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                                                       TaxID=117116;
                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                                                                                                  \vdash
                                                                                                                                                                                                                                                                                                                                                                                                  2 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                  MDKSEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDKS!
                                                                                                                                                                                                                                                                                                                                                                                               imi
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           imilarity; Conservat
                                                                                                                                                                                                                                                                                                                                                                                               ilarity 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SESTSAGRNRR
                                                     ΞZ.
                                                                                                                                                                                                                                                                                                                                  STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                        - +3
                                                                                                                                                                                                                                                                                                                                                     SAGRNRR
     ŭο
                                                     SY
     94)
elo
    Bbuo
                                                    Yu
                                                                                                                                                                                                                                                                                                                                                                                               100.
100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                    t o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rotein) (CP).
(strain lizuka) (
re-strand viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                     \Box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
     the
                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \mathbf{r}
                                                                                                                                                                                                                                                                                                                                                                                                            .0%;
                                                     ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l_cap_coat.
t; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence update)
annotation update)
in) (CP).
     the cu
                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                     Kwon
                                                                                                                                                                                                                                                                                                                                                                                               Score 69; I
Pred. No. 0.
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 coat;
     L/GenBank/DDBJ
cucumoviruses/
                                                                                                                                   viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  087CFBFCDE90B6EB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mismatches
                                                     a
                                                                                                                                                     (CMV)
                                                                                                                                                                                 update)
on update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CMV)
                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             œ
                                                     Kwon
                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                 ).00013
es 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ).00013;
e 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                DВ
                                                                                                                                                                                                                                                    AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                       DNA
                                                                                                                                                                                     <u>e</u>
     J database
/bromoviru
                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                      Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ucumovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stage;
                                                       ĸ
                                                                                                                                     Ø
                                                                                                                                    tag
                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64
                                                                                                                                                                                                                                                                                                                                                                                                  Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                    Pa
                                                                                                                                     Ø
                     Φ
                                                     끚
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ough a collaboration e EMBL outstation - restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bromoviridae
                                                                                                                                     Bromovi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \mathbf{o}
     Œ
                                                      口
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \boldsymbol{\omega}
       \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coat
     coa
                                                      ス
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
     'n
                                                                                                                                       rida
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ch/announce
     prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in no way commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                 Ga
                                                                                                                                                                                                                                                                                                                                                                                                 Bd
                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
SER RESERVATION OF THE RESERVATION OF THE PROPERTY OF THE PROP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ESULT 14

DAT_CMVM

COAT_C
Q00260
01-DEC-1
01-DEC-1
Coat pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cucumovi...

NCBI_TaxID=31716,

[1]

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE=91037954; PubMed=2230731;

Owen J., Shintaku M., Aeschleman P., Tah

"Nucleotide sequence and evolutionary re
"irus (CMV) strains: CMV RNA 3.";

"irol. 71:2243-2249(1990).

"alongs to the cucumovi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Mat
Best Loca
Matches
                                                                 Query Natcher
                                                                                                                                                                                                                                                                                                                                                                                                         This the between the F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; L3
InterPro
InterPro
Pfam; PF
PRINTS; I
ProDom; I
Coat pro
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no would be and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce or send an email to license@isb-sib.ch).
                                                                                                                                                 EMBL;
Interp
Interp
Pfam;
PRINTS
PRODOM
Coat p
SEQUEN
                                                                                                                                                                                                                                                                                                                                         modifi
entiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumber
Viruses;
                                                                                       Гo
                                                                                                          Ма
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mat
                                                                      Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "; L36251; AAA46418.1; -.
Pro; IPR000247; Cucumovirus_coaterPro; IPR008975; Viral_cap_coat.
Pr00760; Cucumo_coat; 1.
PR00222; CUCUMOCOAT.
Dom; PD001284; Cucumovirus_coat; 1
                                                                                       O
                                                                                                                                                                                                                                                                                                                          SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation - uropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way ied and this statement is not removed. Usage by and for commercial ies requires a license agreement (See http://www.isb-sib.ch/announce/end an email to license@isb-sib.ch).
                                                                                                                                                                                        PF00760; Cucumo_coat; 1.
S; PR00222; CUCUMOCOAT.
m; PD001284; Cucumovirus_coat;
                                                                                                                                                                                                                                   Pro; IPR000247; Cucumovirus_co
Pro; IPR008975; Viral_cap_coat
PF00760; Cucumo_coat; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C-1992 (Rel. 24, Created)
C-1992 (Rel. 24, Last sequence update)
C-1998 (Rel. 37, Last annotation update)
protein (Capsid protein) (CP).
ber mosaic virus (strain M) (CMV).
es; ssRNA positive-strand viruses, no DN
                                                                                                           tch
                                                                                                                                                       NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ch
                                                                                                                                                                                                                                                                                                    D10539; BAA01399.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
Similarity 100.0%;
.4; Conservative (
                                                               Similarity 100
.4; Conservative
MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           218 AA;
                                                                                                                                                    218 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24138 MW;
                                                                                                                                                       24243
                                                                                   100.0%;
                                                                                                                                                   MW;
                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                                                                  Score 69; DB 1;
Pred. No. 0.00013;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cucumoviruses/bromoviruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04A21106D3D43344 CRC64;
                                                                                                                                                        75B0BFEB247C93D7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                              _coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tahar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tahar S., Palukaitis P.; relationships of cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; L
0.00013;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA stage; Bromoviridae;
                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                            218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ·.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in no way
                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ion
                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

Figure 1988 1

in and the single of Seq.

THE RESERVE THE PROPERTY OF THE PERSON NAMED IN THE PERSON NAMED I

밁

μ

MDKSESTSAGRNRR

```
Search completed: Job time : 92 secs
                                                                                                             멍
                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OAT CMVN

OAT CMVN

COAT CMV

COAT CMVN

COAT CMV

COAT CMVN

COAT
                                                                                                                                                                                                                    Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                      EMBL; D28486; BAA05845.1; -.
InterPro; IPR000247; Cucumovirus_coat.
InterPro; IPR008975; Viral_cap_coat.
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat; 1.
Coat protein.
SEQUENCE 218 AA; 24078 MW; 0BA67C84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                    th 100.0%;
Similarity 100.0%;
14; Conservative 0
                                                                                                          \mathbf{\mu}
                                                                                                                                                         H
                                                                                                         MDKSESTSAGRNRR 14
                           December
                        5
                      2004,
                                                                                                                                                                                                                 0,
                                                                                                                                                                                                               Score 69; DB 1;
Pred. No. 0.00013;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                             0BA67C84D8F41B22
                        08:07:27
                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   no DNA stage; Bromoviridae;
                                                                                                                                                                                                                                                                       Length 218;
                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                    0
```

```
Title:
Perfect so
Sequence:
                                                                                                                                                                                                                                                                                                         Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Datab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on:
  22222211111111
26543210987654321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  processing:
                                                                                                                                                                                                                                                                                                                                                              Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             score
                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                ۲.
9
                                                                                                                                                                                                                                                                                                          Cor
   Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seq
seq
   ហ
                                                                                                                                                                                                                                                                                                                                                              No. is the greater to a derived
  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                          Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapop
                                                                                                                                                                                                                                                                                                         Query
Match
  552.

552.

552.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

553.

                                                                                                                                                                                                                                                                                                                                                                                                         47813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-
69
1 м
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                    ssued_Patents_AA:*
/cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                         the nu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sued
    γd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         satis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        857-
                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                              number of r
an or equal
y analysis c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seqs,
  Match
Match
first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ហុ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
   ち 1 1 2 3 3 3 3 3 3 4 4 3 3 4 4 4 8 8 4 4 8 8 1 1 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0%
100%
45 81
542259-2
US-08-398-209-2
US-08-398-209-4
US-08-875-233-2
US-08-875-233-4
US-08-875-233-6
US-08-875-233-15
US-09-127-742-2
US-09-127-742-2
US-09-513-999C-482:
US-09-513-999C-482:
US-09-382-080-3
US-09-382-080-3
US-09-328-352-7581
US-09-328-352-7581
US-09-213-011-2
US-09-213-011-2
US-09-583-110-4554
US-09-583-110-4554
US-09-889-746-4
5223423-4
US-09-585-858-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18000
                                                                                                                                                                                                                                                                                                                                                              result:
l to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               summari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ø €
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8:00:12
                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       version - 2004
                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ن ا
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       parameters
                                                                                                                                                                                                                                                                                                                                                              s predicted by e score of the total score of
                                                                                                                                                                                                                                                                                                                                                                                   \mathbf{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Search time 23 (without alignment 40.367 Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.1.6
Compugen
                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                by chance t
the result k
e distributi
                                   4
057
                                                                                        219
                                                                                         B
                                                                                                                                                       J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell
Patent No.
Sequence
                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                                                                to hav being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ຜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  econd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              updates/sec
                                                                                                                                                                                                                                                                                                                                                                                    have
                                                                                                                                                                                                                                                                                                                                                                         ve a printed,
5422259
2, Appli
4, Appli
3, Appli
4, Appli
6, Appli
15, Appli
4, Appli
4, Appli
16, Appli
16, Appli
3, Appli
2, Appli
3, Appli
2, Appli
2, Appli
2, Appli
2, Appli
2, Appli
3, Appli
3, Appli
2, Appli
```

S

S

US-08-398-209-2  US-08-398-209-2  ; Sequence 2, Application US/08398209  ; Patent No. 5789656  ; GENERAL INFORMATION:  APPLICANT: Deboth, Michiel  APPLICANT: No. 57896561, Marianne  APPLICANT: Ben Tahar, Sophia  APPLICANT: Ben Tahar, Sophia  APPLICANT: Perret, Joel  TITLE OF INVENTION: Transgenic Plants Belonging to the  TITLE OF INVENTION: Species Cucumis Melo  NUMBER OF SEQUENCES: 4  CORRESPONDENCE ADDRESS:  ADDRESSEE: Merchant & Gould  STREET: 90 South 7th Street, 3100 No. 5789656west Center  CITY: Minneapolis  STATE: MN  COUNTRY: USA  ZIP: 55402  COMPUTER READABLE FORM:  MEDIUM TYPE: Floppy disk  COMPUTER: IBM PC compatible  OPERATING SYSTEM: PC-DOS/MS-DOS	RESULT 1 5422259-2 ; Patent No. 5422259 ; PITLE OF INVENTION: TRANSGENIC PLANTS BELONGING TO THE ; SPECIES CUCUMIS MELO ; MUMBER OF SEQUENCES: 4 CURRENT APPLICATION DATA: ; APPLICATION NUMBER: US/08/27,563 ; PILING DATE: 05-MAR-1993 ; PRIOR APPLICATION DATA: ; APPLICATION NUMBER: 566,255 ; PILING DATE: 13 AUG-1990 ; SEQ ID NO: 2: ; LENGTH: 217 5422259-2  Query Match Best Local Similarity 100.0%; Score 69; DB 6; Length 217; Best Local Similarity 100.0%; Pred. No. 0.00012; Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps  OY  1 MDKSESTSAGRNRR 14  Db 1 MDKSESTSAGRNRR 14	28 35.5 51.4 1194 2 US-08-680-326-35 29 35 50.7 91 4 US-09-543-6813 Sequence 6613, Appl 30 35 50.7 163 4 US-09-252-991A-29098 Sequence 29098, A 31 35 50.7 213 4 US-09-252-991A-30768 Sequence 30768, A 32 35 50.7 218 3 US-08-875-233-12 33 5 50.7 218 3 US-08-875-233-13 34 35 50.7 248 4 US-09-270-767-55327 35 35 50.7 248 4 US-09-270-767-55327 36 35 50.7 266 4 US-09-270-767-55327 37 35 50.7 266 4 US-09-270-767-55327 38 35 50.7 284 4 US-09-282-991A-32512 Sequence 55327, A 39 35 50.7 284 4 US-09-248-796A-19445 Sequence 19445, A 39 35 50.7 499 3 US-09-487-040B-13 Sequence 21, Appl 40 35 50.7 561 4 US-09-915-99-21 Sequence 21, Appl 41 35 50.7 571 4 US-09-912-059-3 42 35 50.7 579 4 US-09-111-699-8 43 35 50.7 579 4 US-09-111-699-8 44 35 50.7 631 1 US-08-605-541B-12 Sequence 8, Appli 44 35 50.7 752 4 US-09-919-039-235 Sequence 235, Appl

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             us-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Hillson, Randall A.
REGISTRATION NUMBER: 31,838
REFERENCE/DOCKET NUMBER: 8076
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
TELEFAX: 612-332-9081
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/08398209 Patent No. 5789656 GENERAL INFORMATION:
                                                                                                                                                                                                                                        Jen Tahar, SoluTille OF INVENTION: Trans
TITLE OF INVENTION: Special NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS: ADDRESSEE: Merchant & Gostreet: 90 South 7th Correspondences: 4
CITY: Minneapol: STATE: Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ULT 3
08-398-209-4
                                                                                                                           COUNTRY: USA
ZIP: 55402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/398,209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 08/027,563
FILING DATE: 05-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/566,255
FILING DATE: 13-AUG-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 8910848
FILING DATE: 11-AUG-1989
ATTORNEY/AGENT INFORMATION:
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/027,563
FILING DATE: 05-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/566,255
FILING DATE: 13-AUG-1990
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION D
APPLICATION NUMBER:
FILING DATE:
CLASSIFICATION: 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acids
TOPOLOGY: lin-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :n 100.0%;
. Similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                   DeBoth,
                                                                                                                                                                                                                                                                                                                                                                                                   57896561, M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DATA:
                                                                                                                                                                                                                                                                                                                                 Transgenic Plants Belonging
Species Cucumis Melo
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Release
                                                                                                                                                                                                                                                                                                                                                                                       Sophia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/398,209
                                                                                                                                                                                                                                                                                      & Gould
Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08/027,563
93
                                                                                                                                                                                                                                                                                                                                                                                                   Marianne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          076.21US02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1.0,
                                                                                                                                                                                                                                                                                       3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                         Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Version
                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
0.00012;
0;
                                                                                                                                                                                                                                                                                       5789656west
                                                                                                                                                           #1.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                             ď
                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                       Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>.</u>
```

```
RESULT 4
US-08-553:
 멂
                            $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                   COUNTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,6198
FILING DATE: December 1, 1995
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Marcus-Wyner, Lynn
REGISTRATION NUMBER: 34,869
REFERENCE/DOCKET NUMBER: 137-1082/
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/354-3588
TELEFAX: 415/857-1125
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-398-
                                                           Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Patent No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATIC
SEQUENCE
LENGTH
                                                                                                                         MOLECULE T: 08-553-619B-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FR 891084
FILING DATE: 11-AUG-1989
ATTORNEY/AGENT INFORMATION:
NAME: Hillson, Randall A.
REGISTRATION NUMBER: 31,838
REFERENCE/DOCKET NUMBER: 8076
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
TELEFAX: 612-332-9081
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
.08-398-209-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 30

CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 5919705artis Crop Progression of the Corp Progression of the Country: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -619B-3
3 Applicatio
No. 5919705
L INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CANT: DeHaan, OF INVENTION:
                                                             14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14;
                                                     100.0%;
Similarity 100.0%;
.4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDKSESTSAGRNRR 14
MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08553619B
                                                                                                                                linear
E: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Petrus T.
Virus Resistant Plants
30
                                                                                                                                                                                                                                                                                                                                                                US/08/553,619B
r 1, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8910848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8076.21US02
                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                   137-1082/PCT
                                                           Score 69; DB 2;
Pred. No. 0.00012;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 69; DB 1; Pred. No. 0.00012; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                             Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protection
                                                                                          Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,
,
```

```
RESULT 6
US-08-875-233-4
; Sequence 4, A
; Patent No. 61
; GENERAL INFO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
US-08-8
                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SULT 5
-08-875-233-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0,

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                        APPLICANT: Tricoli,
APPLICANT: Reynolds,
APPLICANT: Carney, I
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                          MOLECULE T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, M
                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/0 FILING DATE: 26-JUN-1997 CLASSIFICATION: 800 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                    NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
COMPUTER
                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                               TYPE:
                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
CITY: Ch
STATE: 1
COUNTRY:
                  STATE: 3
                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                              NAME:
                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2,
2,
2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NT: McMaster, J. Russell
NT: Tricoli, David M
NT: Reynolds, John F
NT: Carney, Kim J
F INVENTION: Plants Resis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chicago
: Illinois
                                                                                                                                                                          , Application 6127601
                                                                                                                                                                                                                                                                            100.0%;
Similarity 100.0%;
(4; Conservative
          60089
                             Chicago
Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                               Lisa V. Mueller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application 127601
                                                                                                                                                                                                                                       MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                   MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                       amino
READABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B: Rockey, Milnamow 2 Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                   218
                                                : Rockey, M
2 Prudential
                                                                                                             McMaster, J. Rui
Tricoli, David I
Reynolds, John I
Carney, Kim J
                 U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Boeshore,
                                                                                                                                                     Boeshore,
                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                             26-JUN-1997
N: 800
                                                                                                                                                                                                                                                                                                                                                        acid
                                                                                                                                                                                                                                                                                                                                                                   amino
                                                                                                                                                                                                                                                                                                                                   protein
FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08875233
                                                                                                                                                                                                                                                                                                                                                                  acids
                                                                                                                                                                                      US/08875233
                                                                                          Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15
                                                                               15
                                                                                                                                                      Maury
                                                            Milnamow
                                                                                                                                                                                                                                                             14
                                                Plaza,
                                                                                                                                           Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Resistant
                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                Score 69; DB Pred. No. 0.0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                 & Katz,
180 N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Katz,
80 N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              t to C
                                                                                          Virus
                                                 , Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stetson,
                                                                                                                                                                                                                                                                             DB 3; L
0.00012;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strains
                                                                                                     Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Suite
                                                 Suite
                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
f
                                                                                                    Off.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4700
                                                  4700
                                                                                                                                                                                                                                                                                                     218
                                                                                                                                                                                                                                                                                ·.
                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                 00
```

```
RESULT 7
US-08-875-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECUI
US-08-875-2:
                          ; MOLECU
US-08-875-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acid
TOPOLOGY. 11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 14
                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9-08-875-233-6
Sequence 6, Application US/08875233
Patent No. 6127601
                                                                                                                                                                                        TITLE OF INVENTION: Cucumber Mosaic NUMBER OF SEQUENCES: 15

CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow & Kat: STREET: 2 Prudential Plaza, 180 N CITY: Chicago STATE: Illinois COUNTRY: U.S.A.
ZIP: 60089

COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, 10 CURRENT APPLICATION NUMBER: US/08/875,233 FILING DATE: 26-JUN-1997 CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE:
CURRENT APPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLIC
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 26-JUN-1997
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE:
TOPOLOGY: li
                                                     TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
JRRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 26-JU
                                                                                  LENGTH:
 Match
                                                                                                                                                                                                                                                                                                                                                                                                  ICANT: Carney, Kim of OF INVENTION: Player of SEQUENCES: 15
ESPONDENCE ADDRESS:
                                                PE: amino acids
POLOGY: li-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OLE T
233-4
                          233-6
                                          TE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14;
                                                                                                                                                                                                                                                                                                                                                                                                                                              NT: McMaster, J. Russell
NT: Tricoli, David M
NT: Reynolds, John F
NT: Carney, Kim J
F INVENTION: Plants Resist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
Similarity 100.0%;
[4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                    יאבר: US/08/875,233
26-JUN-1997
N: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                       Plants Resistant
Cucumber Mosaic 1
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maury L
J. Russe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/875,233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 69;
Pred. No.
Score
                                                                                                                                                                                                                                                                                                                                                                              & Katz, Ltd.
180 N. Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Version #1.30
 69;
                                                                                                                                                                                                                                                                                                                                                                                                                                      t to C
Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3; L
0.00012;
0;
 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strains of
ω
~
                                                                                                                                                                                                                                                     #1.30
                                                                                                                                                                                                                                                                                                                                                                                Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 218;
Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

Query

Similarity

Pred.

```
RESULT 8
US-08-875-2
; Sequence
; Patent No
; GENERAL
                                                                                                                                         -Sn
                                                                                                                                                                                     日
                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                    INFORMATIC
TELEFAX: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 15
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acide
TYPE: amino
                                                                                                                                                                                                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                sequence 2, Application US/09127742A Patent No. 6198022 GENERAL INFORMATION:
                                  APPLICANT: DE B
APPLICANT: NOEL
APPLICANT: TAHA
APPLICANT: PERR
APPLICANT: BIOS
TITLE OF INVENT
  CURRENT
                         FILE
                                                                                                                                      ULT 9
09-127-742-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Boeshore, Maury L
APPLICANT: McMaster, J. Russ
APPLICANT: Tricoli, David M
APPLICANT: Reynolds, John F
APPLICANT: Carney, Kim J
TITLE OF INVENTION: Plants R
TITLE OF INVENTION: Cucumber
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 60089

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
OPERATING SYSTEM: PC
SOFTWARE: Patentin R
CURRENT APPLICATION DAT
                                                                                                                                                                                                                                                                             MOLECULE
9-875-233-
                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/875, FILING DATE: 26-JUN-1997 CLASSIFICATION: 800 ATTORNEY/AGENT INFORMATION: NAME: Lisa V. Mueller TELECOMMUNICATION INFORMATION:
LICANT: DE BOTH, MICHAEL
LICANT: NOEL, MARIANNE
LICANT: TAHAR, SOPHIA BEN
LICANT: PERRET, JOEL
LICANT: BIOSEM
'LE OF INVENTION: TRANSGENIC P
'E REFERENCE: 8076.21USD2
'RENT APPLICATION NUMBER: US/ORENT FILING DATE: 1998-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
STREET: 2
CITY: Chic
STATE: Ill
COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E NO. 612/CIRAL INFORMATION:
                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                             :n 100.0%;
. Similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sbr. 2 Fr. Chicago: Illinois U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5, Applio 6127601
                                                                                                                                                                                      MDKS
                                                                                                                                                                                                                                                                                        TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MDKS
                                                                                                                                                                                                    MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     larity 100. Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rockey, Mi
Prudential
                                                                                                                                                                                     ESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  icat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
M PC compatible
TEM: PC-DOS/MS-
AtentIn Release #
                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ion
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         riants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08875233
                                                                                                                                                                                     14
                                                                                                                                                                                                           14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Russell
  US/09/127,
3-03
                                                                                                                                                                                                                                                                                                                                                 15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                 Q
                                    PLANTS
                                                                                                                                                                                                                               Score 69; I
Pred. No. 0.
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 & Katz,
180 N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ed. No. 0.
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version
                                    BELONGING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , Ltd.
Stetson,
                                                                                                                                                                                                                            DB 3; L
0.00012;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.00012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                               #1
                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Suite
                                                                                                                                                                                                                                                     Length
                                    HHT
                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                    SPECIES
                                                                                                                                                                                                                                                       218
                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                    CUCUMIS
                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                    MELO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                 0
;;
```

```
RESULT 11
5422259-4
;Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: P
; ORGANIS
US-09-127-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
US-09-127-
APPLICANT
; PERRET, JOEL
; TITLE OF
; SPECIES CUCUI
; NUMBER OF
; CURRENT
                                                                                                                                                    Ş
                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                           US-09-127-
                                                                                                                                                                           Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF
SOFTWARE:
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Patent No
                                                                                                                                                                                                                                                                     SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL
                                                                                                                                                                                                                                                                                          EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: I
APPLICANT: I
APPLICANT: I
APPLICANT: I
APPLICANT: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                       SOFTWARE
                                                                                                                                                                                                                                                                                                                                                                                                 FILE REF
                                                                                                                                                                                                                   EQ 12
LENGTH: 216
TYPE: PRT
ORGANISM: CU
7 127-742-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                   REFERENCE: 8076.21USD2
NT APPLICATION NUMBER: US/09/127,74
NT FILING DATE: 1998-08-03
ER APPLICATION NUMBER: 08/398,209
ER FILING DATE: 1995-03-02
ER APPLICATION NUMBER: 08/027,563
ER FILING DATE: 1993-03-05
ER APPLICATION NUMBER: 07/566,255
ER APPLICATION NUMBER: FR 89 10848
ER APPLICATION NUMBER: FR 89 10848
ER FILING DATE: 1989-08-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R APPLICATION NUMBER: 08/398,209
R FILING DATE: 1995-03-02
R APPLICATION NUMBER: 08/027,563
R FILING DATE: 1993-03-05
R APPLICATION NUMBER: 07/566,255
R FILING DATE: 1990-08-13
R APPLICATION NUMBER: FR 89 10848
R FILING DATE: 1989-08-11
OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO 2
H: 218
PRT
ISM: cucumber mosaic 1
-742-2
E OF INVENTION: TRANSG
CUCUMIS MELO
ER OF SEQUENCES: 4
ENT APPLICATION DATA:
                                                                                                                                                                                                                                . 218
PRT
                                                         . 5422259
CANT: DE E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4, Application US/09127742A
o. 6198022
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          142-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                                                   INVENTION:
                                                                                                                                                                        100.0%;
Similarity 100.0%;
l4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                               DE BOTH, MICHAEL
NOEL, MARIANNE
TAHAR, SOPHIA BEN
PERRET, JOEL
BIOSEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
Similarity 100.0%;
L4; Conservative (
                                                                                                                                                                                                                                                                                   PatentIn
                                                                                                                                                                                                                                                                                             SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PatentIn Ver.
                                                                                                                                            MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                    cucumber
                                                                                                                              MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR 14
                                                          BOTH,
                                                                                                                                                                                                                                                                                   Ver.
                                                                                                                                                                                                                                    mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                     TRANSGENIC PLANTS
                                   TRANSGENIC
                                                          MICHIEL; BEN TAHAR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.0
                                                                                                                                                                                                                                                                                   ა
.
0
                                                                                                                                                                                                                                     virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virus
                                                                                                                                                                                                                                                                                                                                                                                                              US/09/127,742A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
•
                                                                                                                                                                             0
,.
                                                                                                                                                                          Score 69; DB Pred. No. 0.0); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 69; DB 3;
Pred. No. 0.00012;
Mismatches 0;
                                     PLANTS
                                                                                                                                                                                                                                                                                                                     10848
                                                                                                                                                                                                                                                                                                                                                                                                                                      BELONGING
                                     BELONGING
                                                                                                                                                                        DB 3; L
0.00012;
0;
                                                          SOPHIA; NOEL,
                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                     덩
                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                       HHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                           MARIANNE;
                                                                                                                                                                                                                                                                                                                                                                                                                                       SPECIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                             .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                      CUCUMIS
                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                        MELO
                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

ഗ ~-

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
US-08-875-233-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
RESULT 13
US-09-513-999C-4827; Sequence 4827, Application; Patent No. 6783961
                                                                                           S
                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                  Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      422259
                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/875
FILING DATE: 26-JUN-1997
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEPAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10, Applicate Patent No. 6127601
GENERAL INFORMATION:
                                                                                                                                                                -08-875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U
                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Reynolds, John APPLICANT: Carney, Kim J TITLE OF INVENTION: Plant TITLE OF INVENTION: Cucur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 05-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 566,255
FILING DATE: 13-AUG-1990
                                                                                                                                                                          TOPOLOGY: 1 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Mi
STREET: 2 Prudential
                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
CITY: Ch
STATE: I
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                  : BAYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION
                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO:4:
                                                                                                                                                                233-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10, Application US/08875233
                                                                                                                                                                                                                                                                                                                                                                                                              TRY: U.S.A. 60089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :n 100.0%;
. Similarity 100.0%;
14; Conservative
                                                                                                                   13
                                                                      \vdash
                                                                                                                n 92.8%;
Similarity 92.9%;
l3; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    Chicago
Illinois
                                                                                                                                                                                               amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDKSESTSAGRNRR 14
                                                                                 MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MDKSESTSAGRNRR 14
                                                                      MDKSESTSAGRNHR
                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                             218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     McMaster, J. Ri
Tricoli, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Boeshore,
                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER:
                                                                                                                                                                                                  acid
                                                                                                                                                                                                             amino
                                                                                                                                                                                                                                                                                                                 MBER: US/08/875,233
26-JUN-1997
                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                              acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Maury L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/27,
                                                                                             14
             US/09513999C
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                  0;
                                                                                                                  Score 64; DB 3; Pred. No. 0.0009; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 69; L
Pred. No. 0.
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              & Kat:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      563
                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                               z
                                                                                                                                                                                                                                                                                                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.00012;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Strains
                                                                                                                                                                                                                                                                                                                                                      #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Off.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               4700
                                                                                                                                        218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               218;
                                                                                                                 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                  00
```

```
RESULT 14
US-08-961-564
; Sequence 5,
; Patent No.
; GENERAL IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-513-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
TITLE OF IN
Patent No. 6
FILE REFERE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE:
SEQ ID NO
LENGTH:
TYPE: PF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL
                                                                                                                                                                                                                 OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Wind
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 30-OCT-1997
CLASSIFICATION: 536
PRIOR APPLICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT
CURRENT
PRIOR AP
PRIOR FI
                                                               TELEFAX:
TELEX:
INFORMATION |
SEQUENCE C
                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/056,935
FILING DATE: 25-AUG-1997
ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: GH-7023
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0701
TELEFAX: 610-407-0701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Dumas Milne Edwards, J.B.
APPLICANT: Duclert, A.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: Expressed Sequence
                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: GENE SUPERF NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: RATNER & PRESTIA STREET: P.O. BOX 980
CITY: VALLEY FORGE
STATE: PA
COUNTRY: USA
ZIP: 19482
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
TITLE OF IN
 MOLECU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLI
           TYPE: amino acid STRANDEDNESS: size TOPOLOGY: linear
                                                  RMATION FOR SEQ ID NO:
QUENCE CHARACTERISTICS:
LENGTH: 66 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE: 59.US2.REG

VIT APPLICATION NUMBER: US/09/513,999

VIT FILING DATE: 2000-02-24

APPLICATION NUMBER: US 60/122,487

FILING DATE: 1999-02-26

POF SEQ ID NOS: 36681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             564A-5
5, Applicatic
o. 6114515
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SM: Homo sapiens
999C-4827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O 4827
: 64
PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CANT:
OLOGY: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 6783961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity ! 7; Conservat:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent.pm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INVENTION: PIGRL-1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08961564A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KSESTSAGRNRR 14
                                                                                         846169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QSESTNNGKNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SWEET,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHUJIAN
protein
                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RAYMOND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56.5%;
58.3%;
tive
                                                                                                                                                                                                                                                                                       for Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENE SUPERFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                 US/08/961,564A
                                                                                                                                             23,031
R: GH-70236
                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 39; DB 4
Pred. No. 6.6;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A MEMBER
                                                                                                                                                                                                                                                                                         Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMMUNOGLOBULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Encoded Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

US-08-961-564A-5

```
US-09-382-080-3
US-09-382-080-3
Sequence 3, Application US/09382080
Patent No. 608733
GENERAL INFORMATION:
APPLICANT: Hillman, Jennifer L.
APPLICANT: Goli, Surya K.
APPLICATION USA
ZIP: 94304
COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION NUMBER: US/09/382,080
FILING DATE:
APPLICATION NUMBER: US/09/382,080
FILING DATE:
APPLICATION NUMBER: US/09/382,080
FILING DATE:
APPLICATION NUMBER: 08/859,937
FILING DATE:
APPLICATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0308 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-853-0555
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-853-0555
TELEPHONE: 415-855-0555
TELEPHONE: 415-855-0555
TELEPHONE: 415-855-0555
T
                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
Search completed: Job time : 24 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches
                                                                                                                                                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                       y Match
Local 8
                                                                                           87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27
                                                                                                                                    ហ
                                                                                                                                                                   similarity 70.0%;
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56.5%;
Similarity 72.7%;
8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | | |: ||||| 37
                                                                                          ESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DKSESTSAGRN
                  December
                                                                                                                                       14
                                                                                           96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                    5
                    2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 39; DB 3
Pred. No. 6.8;
1; Mismatches
                                                                                                                                                                             Score 38; DB pred. No. 29; 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ASSOCIATED
                      08:07:56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACIDIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IJ
,
                                                                                                                                                                                                                             ω
··
                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2;
                                                                                                                                                                                                                           Length 172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66;
                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
Title:
Perfect s
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum
Maximum
                                                                                                                                      Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run
                                                                                                                                                                                                                                                                                                                                                                                                                        Dat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rched:
  Q
                                                                                                                                                                                     Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              numbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                              roce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 םם
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         score:
                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ œ
                                                                                                                                       core
                                                                                                                                                                                      8
F:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Н
                                                                                                                                                                                    No. is th greater t
  69
69
69
69
69
69
69
69
69
69
69
69
69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10
                                                                                                                                                                                                                           hits
                                                                                                                                     Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-8
  100.
100.
100.
100.
59.
59.
58.
56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash 6
                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1582122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ecember
                                                                                                                                                                                                                    Published Applications AA:*

| cgn2_6/ptodata/2/pubpaa/USO7_PUBCOMB.pep:*
| cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
| cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*
| cgn2_6/ptodata/2/pubpaa/USO6_PUBCOMB.pep:*
| cgn2_6/ptodata/2/pubpaa/USO7_NEW_PUB.pep:*
| cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*
| cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*
| cgn2_6/ptodata/2/pubpaa/USO9A_PUBCOMB.pep:*
| cgn2_6/ptodata/2/pubpaa/USOOA_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Copyright
                                                                                                                                                                                              the nu
   00000044400000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           search,
                                                                                                                                                                                     γd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   857-
                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000000000
                                                                                                                                                                                                        numbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                     n or equal analysis o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
Match
first
                                                                                                                                                                                            Or
  218
218
218
218
218
218
218
218
225
254
273
273
103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2004,
                                                                                                                                       O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapext
   of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W
                                                                                                                                       Ф
                                                                                                                                                                                                                                                                                                                                                                                                                                          0%
100%
45 ឡ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 662309
                                                                                                                                                                                     0
                                                                                                                                                                                                        H
                                                                                                                                      qI
                                                                                                                                                                                     result:
to the
of the
  08-
08-
08-
08-
08-
08-
08-
08-
08-
08-
                                                                                                                                                                                                                                                                                                                                                                                                                                           summari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88
                                                                                                                                                                                     the t
$-10-011-033-2

$-10-011-033-4

$-10-011-033-6

$-10-011-033-15

$-10-011-033-10

$-10-437-963-189118

$-10-437-963-150193

$-10-437-963-150193

$-10-437-963-190100

$-10-424-599-184959

$-10-425-115-190976

$-10-029-386-31499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3:04:17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            parameters
                                                                                                                                                                                                        Ø
                                                                                                                                                                                     ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                residue
                                                                                                                                                                                   predicte
score of
total sco
                                                                                                                                                                                                                                                                                                                                                                                                                                           O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Search time 353 Seconds (without alignments)
14.144 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.1.6
Compugen
                                                                                                                                                                                    cted by chance to of the result keeps score distributi
                    960038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58212
 Sequence
                                                                                                                                                                                     to have being tion.
 sequence
sequence
                                                                                                                                   cript
                                                                                                                                                                                                        have
                                                                                                                                                                                             printed,
                                                                                                                                      6
                                                                                                                                       Ħ
 2, Appli
4, Appli
6, Appli
15, Appli
10, Appl
189118,
135827,
150193,
190100,
184959,
190976,
31499, 1
           Þ
```

												33																			
												37																			
ω ·	ω.	W	'n	'n	'n		'n		Ę	'n		53.6	'n	ω	·		<b>ω</b>	<u>ა</u>	<u>ა</u>	<u>ب</u>	<u>ა</u>	<u>ა</u>		<u>ភ</u>	<b>ა</b>	<b>.</b>	<b>5</b>	<u>ர</u>	5	<u>ა</u>	ა
~	4	7	B	~	J	$\neg$	9	S	N	0	0	198	$\boldsymbol{\omega}$	4	4	$\vdash$	8	9	$\vdash$	0	Û	9	9	N	$\neg$	۳	S	9	N	10	0
	16							9	9	15	16	16	15	16	16	14	16	15	14	15	16	17	15	17	15	14	16	15	17	17	14
-10-291-265-45	S-10-437-963-16986	-10-425-115-32336	-10-437-963-136	-10-369-493-4258	-10-374-780A-188	-10-282-122A-4901	-09-925-302-559	-09-925-302-559	S-09-925-300-1246	S-10-424-599-21577	S-10-437-963-11073	963	S-10-425-114-5104	S-10-767-701-5636	S-10-437-963-1107	S-10-266-886-7	-10-437-963-1517	S-10-084-846A-6	S-10-369-493-2249	S-10-424-599-24776	S-10-437-963-19	S-10-425-115-20152	S-10-425-114-63801	S-10-425-115-35781	S-10-425-114-5039	S-10-156-761-1107	S-10-437-963-1099	-10-452-858C-31	-10-425-115-24998	-10-425-115-2534	-10-369-493-4135
Sequence 455, App	16986	2336	15	e 4258,	equence 18	9014	59,	59, A	Sequence 1246, Ap	1577	e 11073	e 1296	e 5104	Sequence 56363, A	e 1107	equence	e 1517	` >>	Sequence 22496, A	ው	Sequence 193875,	e 2	e 638	Sequence 357819,	039	10	099	Sequence 31, Appl	4	equence 253470	

 $x_{ij} = \{y_i, y_j \in \mathcal{Y}_{ij}\}_{i \in \mathcal{Y}_{ij}}$ 

## ALIGNMENTS

```
RESULT 1
US-10-011-033-2
; Sequence 2, Application US/10011033
; Publication No. US20020124286A1
; GENERAL INFORMATION:
      COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Versic
CURRENT APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-200
CLASSIFICATION: <Unknown>
PRIOR APPLICATION NUMBER: US/08/875,233
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
                                                                                                                                                                                                                                                                                                                                                                                 SZ
NAME: Lisa V. Mueller TELECOMMUNICATION INFORMATION: TELEPHONE: 312-616-5400
                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                              JMBER OF SEQUENCES: 15
DRRESPONDENCE ADDRESS:
   ADDRESSEE: Rockey, Milnamow
   STREET: 2 Prudential Plaza,
                                                                                                                                                                                                                                                                                          STREET: 2 Pruden
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                    S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
F INVENTION: Plants Resist
                                                                                                                                                                                                                                                                           TRY: U.S.A. 60089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Boeshore, Maury L
McMaster, J. Russ
                                                                                                                                                                                                                                                                                                                                                                                                                  Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                               & Katz, Ltd.
180 N. Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                   t to C
                                                                                                                                                                                       Version
                                                                                                                                                                                                                                                                                                                                                                                                                                    Strains
                                                                                                                                                                                           #1.30
                                                                                                                                                                                                                                                                                                                                                 Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                    Off.
                                                                                                                                                                                                                                                                                                                                                  4700
```

:.

```
RESULT 2
US-10-011-033-4
US-10-011-033-4
; Sequence 4, Application US/10011033
; Publication No. US20020124286A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                    CORKE-
ADDRE-
STREET: 2 :-
STREET: 2 :-
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Versi
APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US2020124286A1-2
CLASSIFICATION NUMBER: US/00/011,033
FILING DATE: 13-No. US2020124286A1-2
CLASSIFICATION NUMBER: US/08/875,233
FILING DATE: 13-No. US2020124286A1-2
PRIOR APPLICATION NUMBER: US/08/875,233
FILING DATE: 2001-1997
ATTORNEY/AGENT INFORMATION:
TELEFOMMUNICATION INFORMATION:
TELEFONE: 312-616-5460
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE
SEQUENCE
S-10-011-033-2
                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 312-616-546
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                Local
                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey,
STREET: 2 Prudenti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch 100.0%;
Similarity 100.0%;
14; Conservative
                                  h 100.0%;
Similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
TOPOLOGY: linear
CULE TYPE: protein
ENCE DESCRIPTION: S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDKSESTSAGRNRR
MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OF
T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   McMaster, J. Ru
Tricoli, David I
Reynolds, John I
Carney, Kim J
INVENTION: Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino
       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Maury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ury L
Russell
                                   <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                  Score 69; I
Pred. No. 0.
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 69; DB Pred. No. 0.0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ë
Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 13;
0.00084;
hes 0;
                                   DB 13;
0.0008;
nes (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virus
                                                                                                                                                                                                                                                                                                                                                                        Version
                                  .3;
0;
                                                                                                                                                                                                                                                                                                                                 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Strains
                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                         #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                             218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4700
                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
0
                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                   ?:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
RESULT 3
US-10-011-033-6
; Sequence 6, Application US/10011033
; Publication No. US20020124286A1
GENERAL INFORMATION:
TRUSS
                                                                                                                                                                                                                       US-10-011-
                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                      Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                 -10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMA
SE
                                                                                                                                                                              GENERAL
                                                                                                                                                                                                                                                                                                                                                    / Match
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Mil
STREET: 2 Prudential F
CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, N
STREET: 2 Prudential
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1

CURRENT APPLICATION NUMBER: US/10/011,033

FILING DATE: 13-No. US20020124286A1-2001

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/875,233

FILING DATE: 26-JUN-1997

ATTORNEY/AGENT INFORMATION:

NAME: Lisa V. Mueller

TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460

MATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID N
-033-6
                                                                                         TITLE
                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              크
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \Omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ŏ
                                                                                                                                                                        033-15
15, Application US/10011033
ion No. US20020124286A1
L INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ITLE OF
                                                                                                                                                                                                                                                                                                                                  100.0%; Similarity 100.0%; 14; Conservative
                                                                                                                                                                                                                                                                               MDKSESTSAGRNRR 14
                                                                                         OH
H
                                                                                      NT: Boeshore, Maury L
McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
F INVENTION: Plants Resis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carney, Kim J
INVENTION: Plants Resistant to C
Cucumber Mosaic Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : Boeshore, Maury L
McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : Rockey, Milnamow Prudential Plaza,
                                                                       Plants Resistant
Cucumber Mosaic 1
                              Milnamow
                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                       Score 69; DB Pred. No. 0.0; Mismatches
                 Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                               NO:
                                                                                                                                                                                                                                                                                                                                                                                                               <u>ئ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        & Katz,
                  & Katz,
                                                                                                                                                                                                                                                                                                                                     DB 13;
0.00084;
                                                                          t to C
Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Ltd.
Stetson,
                  Stetson,
                                                                                         Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strains
                                                                                                                                                                                                                                                                                                                                                                   Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #1.30
                  Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Suite
                                                                                         of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  O
H
                  4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4700
                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                       Gaps
```

멍

Ş

```
RESULT 5
US-10-011-033-10
; Sequence 10, Application US/10011033
; Publication No. US20020124286A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-011-033-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5460
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 15:
                      COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Versic

CURRENT APPLICATION NUMBER: US/10/011,033

FILING DATE: 13-No. US20020124286A1-200

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/875,233

FILING DATE: 26-JUN-1997

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCE:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Mil
STREET: 2 Prudential F
                                                                                                                                                                                                           STREET: 2 Prudent
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release CURRENT APPLICATION DATA:
TELECOMMUNICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2001
CLASSIFICATION: <Unknown>
PAPPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TER READABLE MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                   OH
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; larity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                              McMaster, J. Rus
Tricoli, David N
Reynolds, John N
Carney, Kim J
INVENTION: Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                        Boeshore, Maury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy disk
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                  Cucumber
                                                                                                                                                                                                                                                                                                                                                                 Plants
                                                                                                                                                                                                                                                                                                                                                                                                                             Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                     Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                                                                                                                                                                                                                                                                                        Plaza,
                                                                                                                                                                                                                                                                                                                                                                 Resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                    Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  世1.
                                                                                                                                                                                                                                                                                      & Katz, Ltd.
180 N. Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 13;
0.00084;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                    t to C
                                                                                                                                                  Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Version
                                                                                                                                                                                                                                                                                                                                                                 Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1:
                                                                                                                                                     #1
                                                                                                                                                                                                                                                                                         Suite
                                                                                                                                                                                                                                                                                                                                                                 of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             218
                                                                                                                                                                                                                                                                                         4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

```
RESULT 6
US-10-437-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-011-
                                                                                                                                                                                                                                                                                                                                                           RESULT 7
US-10-437-
                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-437-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF
SEQ ID NO 1
LENGTH: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Publicati
GENERAL 1
                                                                                                                                                                                                                                                                                                            Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
TITLE OF IN
TITLE REFERE
                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
TITLE OF IN
TITLE OF IN
                                                                                                                                                                                                                                                                                       GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE
OTHER I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ANT: barray
ANT: Li, Ping
ANT: Li, Ping
OF INVENTION: Rice Nucleic Acid Mo
OF INVENTION: Plants and Uses The
REFERENCE: 38-21(53221)B
NT APPLICATION NUMBER: US/10/437,96
NT FILING DATE: 2003-05-14
THE SECOND NOS: 204966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E
E
NT: Li, Ping FINVENTION: Rice Nucleic Acid Molecules and Other Molecules FINVENTION: Plants and Uses Thereof for Plant Improvement FERENCE: 38-21(53221)B
APPLICATION NUMBER: US/10/437,963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OLECULE TYPE: protein EQUENCE DESCRIPTION: 333-10
                                                                                                                                                                                                                                                                                    963-135827
135827, Application US/10437963
ion No. US20040123343A1
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION: Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  963-189118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ON NO. US20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 )F SEQ ID NOS:
) 189118
225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63-189118
189118, Application US/10437963
on No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of the state of th
                                                                                                                                      La Rosa, Thomas i
Kovalic, David I
Zhou, Yihua
Cao, Yongwei
Wu, Wei
Boukharov, Andro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 57.1%;
8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             La Rosa, Thomas (
Kovalic, David |
Zhou, Yihua
Cao, Yongwei
Wu, Wei
Boukharov, Andro
Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino TOPOLOGY: CULE TYPE: ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR 14
| |: |:|||:||
MSNSDKTTAGRHRR 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNHR 14
                                                                                            Barbazuk, Brad
Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Andrey A.
                                                                                                                                             Andrey A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
ማ ርዓ
                                                                                                                                                                                                                                        ጽ <u>ና</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT_MRT4530_85657C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 43; DB Pred. No. 27; 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 64; DB 13; Pred. No. 0.0061; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acid Molecules and Other Molecules 
Uses Thereof for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Associated With
                                                                           Associated With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT
US-10-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
US-10-437-963-150193
; Sequence 150193, Application US/10437963
; Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic A
TITLE OF INVENTION: Plants and Us
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/
CURRENT FILING DATE: 2003-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 135827
LENGTH: 193
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic A
TITLE OF INVENTION: Plants and Us
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
Matches
                                                                                                                                                 Sequence 190100, Application US Publication No. US20040123343A1 GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas
APPLICANT: Kovalic, David
                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                               ORGANISM: Oryza sat
FEATURE:
OTHER INFORMATION:
10-437-963-150193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: 10-437-963-135827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Oryza FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                  TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                   -963-
                                                                                                                                                                                                                                                                                                                                                                                                  PRT
                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING
                                                                                                                                                                                                                                                                                                                                                                                                           F SEQ II
150193
254
                                                                                                                                                                                                                                                                           μ
                                                                                                                                                                                                                                                                                            similarity 50.0%; 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 66. 8; Conservative
                                                                                                                                                                                                                                                                           MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MDKSESTSAGRN 12
                                                                                                                                                                                                                                                   LEKSKSTRNGKNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDPSEETSAGKD 12
                                                                                                                                                                                                 190100
                                                                                                                         Kovalic, Dav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DATE:
                                                                                                                                                                                                                                                                                                                                                                                     gativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sativa
                                                                                                                                       , Thomas J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clone
                                                                                                                                                                                                                                                                                                                                                             Clone
                                                                                                                                                                                                                                                                                                                                                                                                                         2003-05-14
204966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2003-05-14
204966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59.4%;
                                                                                                                                                                                                                                                                           14
                                                                                                                                                                                                                                                                                                                                                             ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID:
                                                                                                                                                                                        US/10437963
               US/10/437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 41; DB Pred. No. 50; 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                             PAT
                                                                                                                                                                                                                                                                                                Score 41; DB Pred. No. 67; S; Mismatches
                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT_MRT4530_37465C.1.pep
                                      Uses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Uses
                                                   Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Acid Molecules a
                                                                                                                                                                                                                                                                                                                                                             MRT4530
                                      Molecules a
                                                                                                                                                                                                                                                                                                             DB
67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50;
                                                                                                                                                                                                                                                                                                                                                             50452C
                                                                                                                                                                                                                                                                                                                         16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                 and Other Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Other Molecules Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
••
                                                                                                                                                                                                                                                                                                 2;
                                                                                                                                                                                                                                                                                                                                                              -
                                        Plant
                                                                                                                                                                                                                                                                                                                                                             . pep
                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                 Indels
                                       Improvement
                                                                                                                                                                                                                                                                                                                          254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193;
                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                 Gaps
                                                   Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                 0,
                                                   With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                With
```

```
RESULT 11
US-10-425-
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                            US-10-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-424-
                                                          APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules a
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(53222)B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 190976
LENGTH: 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: La Rosa Thomas J
APPLICANT: Kovalic David K
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Acid Molecul
TITLE OF INVENTION: Plants and Uses Thereof
FILE REFERENCE: 38-21(53223)8
CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 285684
SEQ ID NO 184959
LENGTH: 159
                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches
                                                                                                                                                                                                                              Sequence
Publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID
SEQ ID NO 190100
LENGTH: 273
                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ
                                                                                                                                                                                                                    GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -10-437-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Oryza
FEATURE:
                                      TYPE: PORGANIS
                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 159
TYPE: PRT
ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER
                         FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER
                                                                                                                                                                                                                                                                                                                                                                                                             424-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                INFORMATION:
INFORMATION:
La Rosa, Thomas
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION: 599-184959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
963-190100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         399-184959
184959, Application US/10424599
ion No. US20040031072A1
                                                                                                                                                                                                                              15-190976
190976, Application US/10425115
on No. US20040214272A1
                                     М: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NFORMATION:
                                                                                                                                                                                                                                                                                                           Ŋ
                                                                                                                                                                                                                                                                                                                                                       similarity 88.9%;
8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               similarity 69.2%;
9; Conservative
                                                                                                                                                                                                                                                                                                         STSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DKSESTSAGRNRR 14
| |||:| | |||
DWSESSSNGENRR 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clone
                                                                                                                                                                                                                                                                                                                                                                                                                          Clone
             Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              204966
            ID:
                                                                                                                                                                                                                                                                                                                                                                                                                         ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ID:
                                                                                                                                                    Acid Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 41; DB Pred. No. 72; 1; Mismatches
           MRT4577_105749C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                       PAT_MRT3847_138032C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT_MRT4530_86546C.
                                                                                                                                                                                                                                                                                                                                                                       Score 40;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Molecules and Other Molecules
Thereof for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                       DB
62;
                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16;
                                                                                                                                                                                                                                                                                                                                                                                    15;
                                                                                                                                                        Other
                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.pep
                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                             Indelø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                        Molecules
                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
•
                                                                                                                                                       Associated
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Associated
                                                                                                                                                        With
                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
US-10-425-115-188688; Application US/1; Sequence 188688, Application US/1; Publication No. US20040214272A1; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.; APPLICANT: Kovalic, David K.; APPLICANT: Zhou, Yihua; APPLICANT: Cao, Yongwei; TITLE OF INVENTION: Nucleic Acid; TITLE OF INVENTION: Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
US-10-(
                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
TITLE OF INVENTION: HUMAN GENOME-DERIVED SITITLE OF INVENTION: EXPRESSION ANALYSIS TO FILE REFERENCE: AEOMICA-X-2
CURRENT APPLICATION NUMBER: US/10/029,386
CURRENT FILING DATE: 2001-12-20
NUMBER OF SEQ ID NOS: 34288
                                                          FILE REFERENCE: 38-21 (53222) B
CURRENT APPLICATION NUMBER: US/1
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 188688
LENGTH: 103
TYPE: PRT
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Ma
Best Loc
Matches
Query
Best I
                                                                                             SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -10-029-386-31499
Sequence 31499, Application US/
Publication No. US20030194704A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 68
                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo
FEATURE:
OTHER INFORMATIO
OTHER INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE:
                               OTHER INFORMATION: 10-425-115-188688
                                                                                                                                                                                                                                                                                                                                                                          OTHER
OTHER
10-029-
                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER
OTHER
                                                                                                                                                                                                                                                                                                                                                                                                          OTHER
                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-029-
                                                                                                                                                                                                                                                                                                                                         Local
/ Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                     Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
INFORMATION:
INFORMATION:
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION: INFORMATION: INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                          386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31
                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                 56.5%;
Similarity 58.3%;
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 53.8%; 7; Conservative
 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |:||::: || ||
DRSEASAPGRGRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Penn,
                                                                                                                                                                                                                                                                                        QSESTNINGKNKR
                                                                                                                                                                                                                                                                                                            KSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                            31499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sharron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                  MAP TO ACO
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
SWISSPROT
                                         Clone
56.
50.
                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ω
05
                                          ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/100293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/10/029,386
                                                                                                                            US/10/425,115
                                                                                                                                                                                                                                    US/1
                                                                                                                                                           Acid
                                                                                                                                                                                                                                                                                                                                                                                                            1020728.4

IN BONE MARROW, S.

IN PLACENTA, SIGNAL

IN BRAIN, SIGNAL

IN BRAIN, SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                              MRT4577_103673C.1.pep
                                                                                                                                                                                                                                                                                                                                 Score 39; DB
Pred. No. 39;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 40; DB
Pred. No. 79;
4; Mismatches
Score Pred.
                                                                                                                                                                                                                                                                                                                                                                                  FETAL LIVER, SI
HELA, SIGNAL =
T: P42285, EVALU
                                                                                                                                                            Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                   MARROW, SIGNAL
39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SINGLE
TWO
 ហ
),
9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vers.
                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                     EVALUE
                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL = :
                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -1
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                            Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EXON NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     اد
                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                    2.00e-
         Length
                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                       1.5
                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                          Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    11
                                                                                                                                                            Molecules
                                                                                                                                                                                                                                                                                                                                                                                                          1.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
          103;
                                                                                                                                                                                                                                                                                                                                                     68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                            Associat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROBES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USEFUL
                                                                                                                                                                                                                                                                                                                                 <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FOR
```

```
RESULT 14
US-10-369-4
; Sequence
; Publicati
                                                                                                                                                                                                                                                                                                                       RESULT 15
US-10-425-
                                                                                        ; FEATURE:
; OTHER INF
US-10-425-115
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
 뭥
                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Chen, Xianteny
APPLICANT: Chen, Xianteny
TITLE OF INVENTION: EXPRESSION OF MICROBIA
FILE REFERENCE: 38-10(52052)B
CURRENT APPLICATION NUMBER: US/10/369,493
CURRENT FILING DATE: 2003-02-28
PRIOR APPLICATION NUMBER: US 60/360,039
PRIOR FILING DATE: 2002-02-21
PRIOR FILING DATE: 2002-02-21
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
Matches
                                           Query Naest Lo
                                                                                                                                                                                                                                                                                                Sequence
Publicati
                                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL
                                                                                                                                                                                                                                                                                       GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                               CURRENT
NUMBER O
SEQ ID NO
LENGTH:
                                                                                                                                                                                            TITLE OF
TITLE OF
FILE REF
CURRENT
                                                                                                                                                                                                                                                  APPLICANT: La Rosa, Thomas
APPLICANT: Kovalic, David
APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: 1
10-369-493-
                                                                                                                         TYPE: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH
                                                       Local
                                                                   Mai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CANT: Hinkle, Gregory J.
CANT: Slater, Steven C.
CANT: Slater, Steven C.
CANT: Goldman, Barry S.
CANT: Chen, Xianfeng
OF INVENTION: EXPRESSION OF MICROBIAL
OF INVENTION: PLANTS WITH IMPROVED P
REFERENCE: 38-10(52052)B
NT APPLICATION NUMBER: US/10/369,493
                                                                                                                                                                      APPLICATION NUMBER: US/10/425,115
FILING DATE: 2003-04-28
OF SEQ ID NOS: 369326
                                                                                                                                                                                                                                                                                    115-253470
253470, Application US/10425115
ion No. US20040214272A1
INFORMATION:
                                                                  tch
                                                                                        INFORMATION:
                                                                                                                                                                                                       F INVENTION: Plants
FERENCE: 38-21(53222)B
                                                                                                                                                                                                                                                                                                                                                                     985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93-4135
4135, Application US/10369493
on No. US20030233675A1
                                                                                                                                                                                                                           T: Kovalic, David K.
T: Zhou, Yihua
T: Cao, Yongwei
INVENTION: Nucleic !
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85
90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F SEQ
4135
1104
                                                                                                                                                109
                                                                                                                                                          253470
                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 53.8%; 7; Conservative
                                           Similarity 6; Conservat
                                                                                                                        Zea
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neurospora crassa
.4135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cao,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                     ||:| :|||| :
DKTEKRAAGRNTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LDQLSKTMSGRNRR
KKKTTTAGKNRK
           KSESTSAGRNRR | :: |: | |: | |:
                                                                                                                                                                                                                                                                                                                                                                                         DKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                         mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yongwei
                                                                                                    Clone
                                          55.1%
50.0%
cive
                      14
 101
                                                                                                                                                                                                                                                                                                                                                                      997
                                                                                                                                                                                                                                                                                                                                                                                           14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                    ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98
                                                                                                                                                                                                                                                               . . . ·
                                                                                                                                                                                                                              Acid Molecules
                                                       ** **
                                                                                                    MRT4577_162747C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                 w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ü
                                        Score 38; DB Pred. No. 93; 5; Mismatches
                                             ហ
                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MICROBIAL PROTEINS IMPROVED PROPERTIES
                                                                                                                                                                                                                                                                                                                                                                                                               re 39; DB 14; d. No. 6.6e+02; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                               and Other
                                                                   17;
                                             4
                                                                   Length 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                               Molecules Associated With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                        1104;
                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                 <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FOR PRODUCTION
                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                 <u>o</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QF
```

THE RESERVE OF THE PERSON OF T

Search

com

pleted:

December

5

2004,

08:13:

Job time :

353 secs

.

```
Title:
Perfect s
Sequence:
                                                                                                                                                                                                                                                                      Minimum
Maximum
                                                                                                                                                                                                                                                                                      Total
                                                                                                            Result
No.
                                                                                                                                                                                                                                                                                                                                                           Run
                                                                                                                                                                                                                                                                                                earched
                                                                                                                                                                                                                                                                                                                coring table
                                                                                                                                                                                                                                       ıtabası
                                                                                                                                                                                                                                                                                                                                                                     nucleic
                                                                                                                                                                                                                                                                                                                                                           9
     proce
                                                                                                                                       Pred. Negand is
                                                                                                                                                                                                                                                                                      number
                                                                                                                                                                                                                                       Ø
                                                                                                                                                                                                                                                                      BCD
BCD
                                                                                                                                                                                                                                                                                                                                score
                                                                                                             Ø
     core
                                                                                                                                                                                                                                                            \alpha
                                                                                                                                                                                                                                                                     seq
                                                                                                                                                                                                                                                           sing:
                                                                                                                                                                                                                                                                                                                                                                      ı
                                                                                                                                      No. is the number of a greater than or equal a derived by analysis of
    of
                                                                                                                                                                                                                                                                                                                                                                     nucleic
                                                                                                                                                                                                                                                                      length:
length:
                                                                                                                                                                                                                                                                                                                           US-09-857-8
53
1 gatccatgg
                                                                                                            Query
Match
                                                                                                                                                             11111987654321
                                                                                                                                                                                                                                                                                      hits satisfying
                                                                                                                                                                                                                                                                                                          IDENTITY_NUC Gapop 10.0 ,
                                                                                                                                                                                                                                                                                               4526729 seqs,
                                                                                                                                                                                                                                                                                                                                                           December
                                                                                                                                                                                                                                                Minimum
Maximum
Listing
     GenEmbl:
                                                                                                                                                         gb ba: *
gb ba: *
gb on: *
gb on: *
gb pr: *
gb pr: *
gb pr: *
gb vi: *
gb vi: *

                                                                                                                                                                                                                                                                                                                          gatccatggacaaatctgaa
                                                                                                                                                                                                                                                                                                                                                                                     Copyright
     000004444444444444
                                                                                                                                                                                                                                                                                                                                                                     search,
                                                                                                             Length
                                                                                                                                                                                                                                                                      0
2000000000
                                                                                                                                                                                                                                                Match
Match
first
     771
772
772
792
130
130
130
131
131
131
131
152
152
154
                                                                                                                                                                                                                                                                                                                                      841-
                                                                                                                                                                                                                                                                                                                                                          5,
                                                                                                                                                                                                                                                                                                                                                                                     GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                    using
                                                                                                                                                                                                                                                                                                                                                          2004,
                                                                                                                                                                                                                                                                                                          Gapext
     23644849
                                                                                                                                                                                                                                                 0%
100%
45 នា
                                                                                                                                                                                                                                                                                      chosen
                                                                                                                                       results predicted by chance to have a l to the score of the result being printed, of the total score distribution.
    BD261798

AR1111976

AR1111975

AR031575

AR065687

AR097446

I49964

AR031572

AR031572

AR031572

AR031570

AR031570

AR031570

AR031574

AR097441

I49959

AR031574

AR065686

AR097445
                                                                                                                                                                                                                                                 summari
                                                                                                                                                                                                                                                                                                                                                                     ₩
                                                                                                                                                                                                                                                                                                                                                           06:06:43
                                                                                                                                                                                                                                                                                                           \vdash
                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                     version - 2004
                                                                                                                                                                                                                                                                                                           .
                                                                                                                                                                                                                                                                                                                                                                    model
                                                                                                                                                                                                                                                                                                745
                                                                                                                                                                                                                                                                                      parameters:
                                                                                                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                re
                                                                                                                                                                                                                                                                                                                                               ; Search time 1421 (without alignments) 1763.796 Million cel
                                                                                                                                                                                                                                                                                                sidue
                                                                                                                                                                                                                                                                                                                                                                                    5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                          .gtcgtaaccgtcgacgagct
                                                                                                                                                                                                                                                                                                Ø
                                                                                                                                                                                                                                                                                      90534
BD261798 Enhanceme
AR111976 Sequence
AR1111981 Sequence
AR1111975 Sequence
AR031575 Sequence
AR031575 Sequence
AR097446 Sequence
149964 Sequence
149964 Sequence
AR097443 Sequence
149961 Sequence
149961 Sequence
149961 Sequence
149961 Sequence
AR031570 Sequence
AR031570 Sequence
AR031574 Sequence
AR097441 Sequence
AR097445 Sequence
AR065686 Sequence
AR065686 Sequence
                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                cell
                                                                                                                                                                                                                                                                                                                                                           Seconds
                                                                                                                                                                                                                                                                                                                                                updates/sec
                                                                                                                                                                                                                                                                                                                           ហ
```

						w																		21	
បា		<u>ម</u> ា	<u>.</u>		ហ	ហ	5	5	5	5.	5	5	5	<u>ა</u>		5		ហ	უ	•		უ	ហ	45.8	ហ
9	9	9	9	9	9	9	6	9	9	9	<u>.</u>	9	9	9	9	9	9	•	ა	ა	ა	ა	ტ	86.4	
69	37	36	11	11	90	90	04	03	Ō	00	00	00	00	00	00	00	<b>~</b> 1	7	~3	7	7	9	σ	862	S
თ	თ		14		თ	თ		14		თ	თ	σ	თ	σ	σ	o,	σ	σ	σ	σ	σ		14	14	Q
4182	E01821	CVC	13162	ř	98	$\vdash$	VCOAT	2	CVRN	0027	R43019	6471	38	02148	81	2133	0027	64	3834	2148	W	VCP	285	N	I49963
A41823 Sequence 4	E01821 cDNA encodi	10 Cucu	_	AJ131624 Cucumber	œ	Se	X77855 Cucumber Mo	82	386 C	0279	AR430190 Sequence	AR364711 Sequence	AR138343 Sequence	AR021487 Sequence	A39812 Sequence 6		Tr	0	AR138342 Sequence	6 Se	A32131 CMV capsid	Cuc	ហ	285	149963 Sequence 13

ເນ

## ALIGNMENTS

<u>,</u>					<del> </del>		<del></del>								<del></del>								
Qy	Query Match Best Local Matches 5	ORIGIN	source	FEATURES						COMMENT		JOURNAL	TITLE	AUTHORS	REFERENCE		ONGANTON	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	BD261798 LOCUS
1 GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT 53	100.0%; Score 53; DB 6; Length 53; Similarity 100.0%; Pred. No. 3.6e-11; 53; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	/organism="cucumber mosaic virus" /mol_type="genomic DNA" /db_xref="taxon:12305"			FT CDS (6)(47).	ubiquitin or	C12N5/00 CC Enhancement in protein production by higher plants using CC	XIANG 5/09,A	PD 02-OCT-2002	OS Cucumber mosaic virus	STITUTE OF MOLECULAR A	Patent: JP 2002532098-A 2 02-OCT-2002;	nancement in protein p	Wu, J.L. and Chen, X.Y.	1 (bases 1 to 53)	rus.	Viruses: ssRNA positive-strand viruses, no DNA stage: Bromoviridae:		32098-A/2.	261798.1 GI:3	or cucumber mosaic virus coating protein peptide. BD261798	ent in protein production by higher plants using	BD261798 53 bp DNA linear PAT 17-JUL-2003

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
              DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
                                               RESULT 4
AR111975
LOCUS
                                                                                                                                                                                     TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                      RESULT 3
AR111981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT :
AR111976
LOCUS
                                                                                        日
                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
         SOURCE
                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                     뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                               Ħ
                                                                                                                      Query Match
Best Local
Matches 4
                                                                                                                                                                                                                      SFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                               sourc
                                                                                                                                                                                                                                                                                                                                                                                                                           Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  o N
                                                                                                                                                                                                                                                                                                                                                                                   Match
                                                                                                                                        Match
                                                                                                                                                    Unknown.

Unclassified.

(bases 1 to 772)

(bases 1 to 772)

Boeshore, M.L., McMaster, R.J., ...

Carney, K.J.

Plants resistant to C strains of a patent: US 6127601-A 14 03-OCT-20
Location/Qualifiers

1. .772

-anism="unknown"
"unassigned D
                                                                                                                                                                                                                                                                                                                                                                                                    Unclaster.

1 (bases 1 to //1,
Boeshore,M.L., McMaster,R.J.,
Carney,K.J.
Plants resistant to C strains of cucumber more patent: US 6127601-A 5 03-OCT-2000;
Location/Qualifiers
1. .771
1. .771
---ism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                            Œ
                       AR111975
Sequence
AR111975
AR111975.
                                                                                                                                                                                                                                                                     AR111981
Sequence 14
AR111981
AR111981.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR111976
Sequence
AR111976
AR111976.
                                                                                                                       46
 Unknown
        Unknown.
                                                                                                                                                                                                                                                                                                                                                                   Similarity
46; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                              Similarity
                                                                                      CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                   CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86.8%;
larity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>,</u>
                                                                                                                                                                                                                                                                                      14
                                        W
                        \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ហ
                                       from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from
                        GI
                                                                                                                                                                                                                                                                                      m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:
                                                                                                                                                                                                                                                                      GI:12828829
                                                                                                                                                                                                                                                                                      rom
                                                                                                                                                                                                                                                                                                                                                                   86.8%;
100.0%;
tive (
                        :12828823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1282882
                                       patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  patent
                                                                                                                                                                                                                                                                                    patent
                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                      Score 46; DB 6; L
Pred. No. 5.1e-08;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                   Score 46; DB 6; L
Pred. No. 5.1e-08;
); Mismatches 0;
                                        SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sn
                                                                                                                                                                                                                                                                                     us
7
                                        792 bj
6127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  771 bp
61276
                                                                                                                                                                                                                                                                                     72
                                                                                                                                                                                            of cucumber
T-2000;
                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                      Tricoli,D
                                        ので
                                                                                                                                                               DNA"
                                                                                                                                                                                                                                                                                      601
                                        01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   z
                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                      mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                   mosaic
                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                    Indels
                                               inear
                                                                                                                                                                                                                      Reynolds,
                                                                                                                                                                                                                                                                                             inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Reynolds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          near
                                                                                                                                                                                                                                                                                                                                                                                    771;
                                                                                                                                        77
                                                                                                                                                                                                                                                                                                                                                    49
                                                                                        46
                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                                                                     46
                                                                                                       49
                                                                                                                                      ญ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    virus
                                               PAT
                                                                                                                                                                                                                                                                                             PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT
                                                                                                                                                                                                                      J.F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J.
                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    щ
                                                                                                                                                                                                                                                                                             14-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-
                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                    Ga
                                                 T
                                                                                                                                                                                                                                                                                                                                                                    Ö
                                                                                                                                                                                                                                                                                             FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEB-2001
                                                                                                                                                                                                                                                                                                                                                                    Ø
                                                2001
                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                             DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
FEATURES
                                                             TITLE
JOURNAL
FEATURES
                                                                                       REFERENCE
AUTHORS
                                                                                                                                                              RESULT 6
AR065687
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
AR031575
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                      日
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                ORIGIN
                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                     Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
        Query
Best I
                                                                                                               ORGANISM
Matches
                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                             Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                        sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Loca
        Loca
                                                                                                                                                                                                                                              Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ma
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unclassified.

1 (bases 1 to 792)

Boeshore,M.L., McMaster,R.J., Tricoll,...

Carney,K.J.

Plants resistant to C strains of cucumber mosaic vi

Plants us 6127601-A 3 03-OCT-2000;

Location/Qualifiers

1. .792

1. .792

1. .792

1. .792

1. .792

1. .792

1. .792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   al
             tch
                                                                                                                                                                                                                                                                                                                                                         al |
                                                            Unknown.
Unclassified.
1 (bases 1 to 130)
1 (bases 1 to 130)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,H.M.
Cell ablation using trans-splicing ribozymes
Patent: US 5849548-A 14 15-DEC-1998;
Location/Qualifiers
                                                                                                                                                                                                  AR065687
Sequence 1
AR065687
AR065687.1
                                                                                                                                                                                                                                                                                                                                                                                                    Unclassified.

1 (bases 1 to 130)

Haseloff, J., Brand, A., Perrimon, N. and Goodman, H.M. Cell ablation using trans-splicing ribozymes

Patent: US 5866384-A 14 02-FEB-1999;

Location/Qualifiers

1. .130

1. .130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR031575
Sequence
AR031575
AR031575.
h 86.4%;
Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                               œ
                                                                                                                                                                                                                                                                                                                                             47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46;
                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                        1
Similarity 95.9%;
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      similarity 100.0%; 6; Conservative
                                                                                                                                                                                                                                                                                                          GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGTCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                1. .130
/organism="unknown"
/mol_type="unassigne
                                                                                                                                                                                                                           14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                                                                                                                1. .130
/organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \vdash
                                                                                                                                                                                                                        130 bp
from patent US 5849548.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:5945864
                                                                                                                                                                                                     GI:5995903
                                                       _type="unassigned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    patent
Score 45.8; DB 6;
Pred. No. 4.6e-08;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                           Score 45.8; DB 6; Pred. No. 4.6e-08; 0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 46; DB Pred. No. 5.1 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130 bp
US 5866384
                                                            DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6; LC
5.1e-08;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                        Length
                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Reynolds, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46
                         130;
                                                                                                                                                                                                                                                                                                                                                                     130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          virus
                                                                                                                                                                                                                                                                                                                        49
                                                                                                                                                                                                                                                                                                 96
                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT
  .
•
                                                                                                                                                                                                                                                                                                                                              ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ţ
                                                                                                                                                                                                                                      29-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-
 Gaps
                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gap
                                                                                                                                                                                                                                      SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ø
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                             <u>,,</u>
```

```
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 7
AR097446
LOCUS
       VERSION
KEYWORDS
SOURCE
                                   DEFINITION
ACCESSION
                                                     RESULT 9
AR031572
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                    뭥
                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                               COCUS
                                                                                                                                                                                                                EATURES
                                                                                                                                       Query Match
Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                        Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                        ø
                                                                                                                                                                                                                                                                                                                                                                             48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48
                                                                                                                                                                                                                                                                                                 149964
Sequence
149964
149964.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 130)
Haseloff, J., Brand, A., Perrimon, N. and Goods
Cell ablation using trans-splicing ribozymes
Patent: US 6071730-A 14 06-JUN-2000;
Location/Qualifiers
1. .130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR097446
Sequence
AR097446
AR097446.
                         AR031572
Sequence
AR031572
AR031572.
                                                                                                                                                                                                           1 (bases 1 to 130)
Haseloff,J., Brand,A., Perrimon,N. and Good
Cell ablation using trans-splicing ribozyme
Patent: US 5641673-A 14 24-JUN-1997;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \boldsymbol{\mu}
                                                                                                    \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                              H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                        Unknown
Unknown.
        Unknown.
                                                                                                                                                                                                                                                              Unclassified.
                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                       n 86.4%;
Similarity 95.9%;
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                           GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                           ._
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \mathbf{H}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                     14
                                             11
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="unknown"
/mol_type="unassion
                                                                                                                                                                                     1. .130
/organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                   GI:2472184
                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:12806176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from
                           GI:59
                                             rom
                                                                                                                                                                                                                                                                                                                                                                                                                                                             type="unassigned
                                                                                                                                                                                    type="unassigned
                                                                                                                                                                                                                                                                                                                     patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             patent
                                           patent
                           45861
                                                                                                                                                                                                                                                                                                                                                                                                              Score 45.8; DB 6; Pred. No. 4.6e-08; 0; Mismatches 2
                                                                                                                                        0
                                                                                                                                       Score 45.8; DB 6;
Pred. No. 4.6e-08;
); Mismatches 2
                                                                                                                                                                                                                                                                                                                     130
US 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gg
1
                                            US
US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130 bp
S 6071730.
                                                                                                                                                                                                                                                                                                                     30 bp
5641673
                                             . bp
:86638
                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA"
                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                      DNA
                                                                                                                                                                                                                                           Goodman, H.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goodman, H.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                         Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                               linear
                                                       inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .near
                                                                                                                                                                                                                                                                                                                                                                                                                                   130;
                                                                                                                                                                                                                                                                                                                                                                                              49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96
                                                                                                                      49
                                                                                                                                                                                                                                                                                                                              PAT
                                                      PAT
                                                                                                    96
                                                                                                                                                                                                                                                                                                                                                                             96
                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-
                                                       29
                                                                                                                                                                                                                                                                                                                                07-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                       Gaps
                                                       SEP-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                       0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
FEATURES
                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                       RESULT 11
AR097443
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
AR065684
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                               ঠ
                                          ORIGIN
                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                   Query Ma
Best Loc
Matches
Query Match
Best Local
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                        Bourc
                                                                                                                                                                                                                                                                                                                                                                           Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Loca
                                                                                                                                                                                                                                                                                                              COL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                      tch
                                                                                                                                                                                                                                                                                                              al
                                                                                                                                                                                                                                                                                                                        tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49
                                                                                                                                                                                                                                                             49
                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
Unknown.
Unclassified.
                                                                                                                                                                          AR097443
Sequence 11
AR097443
AR097443.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR065684
Sequence
AR065684
AR065684.
                                                                                                                                            Unknown.
                                                                               1 (bases 1 to 131)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,
Cell ablation using trans-splicing ribozymes
Patent: US 6071730-A 11 06-JUN-2000;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 131)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,
Cell ablation using trans-splicing ribozymes
Patent: US 5866384-A 11 02-FEB-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                  h 86.4%; Similarity 95.9%; 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 131)
Haseloff,J., Brand,A., Perrimon,N. and Good
Cell ablation using trans-splicing ribozyme
Patent: US 5849548-A 11 15-DEC-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47;
 Similarity 47; Conserv
                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified
                                                                                                                         Unclassified.
1 (bases 1 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 7; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                     GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                            GAGTCATGGACAAATCTGAATCAACCAGTG
                                                                                                                                                                                                                                                                                                                                              1. .131
/organism="unknown"
/mol_type="unassigne
                                                                                                                                                                                                1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11
                                                    /organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI :
  á
                                                                                                                                                                            GI:12806173
                                                                                                                                                                                                from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86.4%;
95.9%;
Live
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _type="unassigned DNA"
 86.4%;
95.9%;
tive
                                                   _type="unassigned
                                                                                                                                                                                                                                                                                                                                                     type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                995900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 patent
                                                                                                                                                                                               patent
                                                                                                                                                                                                                                                                                                  Score 45.8; D
Pred. No. 4.6e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 45.8; DB 6;
Pred. No. 4.6e-08;
); Mismatches 2;
Score 45.8; DB 6;
Pred. No. 4.6e-08;
); Mismatches 2
                                                                                                                                                                                               us
Us
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131 bp
US 5849548
                                                                                                                                                                                               131 bp
3 6071730.
                                                    DNA"
                                                                                                                                                                                                                                                           CTGGTCGTAAC
                                                                                                                                                                                                                                                                                                             DB 6;
                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                  Goodman, H.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                      Length
                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                            CGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indel
                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Œ
                                                                                                                                                                                                                                                                                                                         131;
                      131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            131;
                                                                                                                                                                                                                                                                                 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                          PAT
                                                                                                                                                                                                                                                              97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                     <u>.</u>
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29
                                                                                                                                                                                                           14-FEB-2001
  Gap
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ည်
  Ď
  0
                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

A CONTRACTOR OF THE SECOND SEC

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                     DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                      TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                             RESULT 14
AR065682
                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                           RESULT 13
AR031570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
I49961
                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                            뭐
                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                          日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                      FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                      EATURES
                                                                                                                          Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
Matches 4
       ORGANISM
                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                              sourc
                                                                                                                                                                                 source
                                                                                                                                 y Match
Local (
                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                   Unknown.

Unclassified.

(bases 1 to 152)

(bases 1 to 152)

Haseloff, J., Brand, A., Perrimon, N. an Cell ablation using trans-splicing ripatent: US 5866384-A 9 02-FEB-1999;
Location/Qualifiers

152
                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified.

1 (bases 1 to 131)

Haseloff, J., Brand, A., Perrimon, N. and Cell ablation using trans-splicing rib Patent: US 5641673-A 11 24-JUN-1997;

Location/Qualifiers

1. .131
                                                                                            70
                                                                                                                                                                                                                                                                                                                          49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         149961
Sequence
149961
149961.1
     Unknown.
Unknown
                             AR065682
Sequence
AR065682
AR065682.
                                                                                                                                                                                                                                                           AR031570
Sequence
AR031570
AR031570.
Uncl.
                                                                                                                           47
                                                                                                                                                                                                                                                                                                                                                       Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                        n 86.4%;
Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                             Unknown.
                                                                                           GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                        assi
fied
                                                                                                                                                         1. .152
/organism="unknown"
/mol_type="unassigne
                                                                                                                                                                                                                                                             Ļ
                              μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11
                                              9
                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                            1. .131
/organism="unknown"
/mol_type="unassigned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:2472181
                                               m
                              GI:
                                                                                                                                                                                                                                                             GI:5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          from
                                             rom
                                                                                                                                                                                                                                                                            rom
                              ហ
                                                                                                                                                                                                                                                                          patent
                                            patent
                                                                                                                                                                                                                                                             94585
                              99589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         patent
                                                                                                                          ;
                                                                                                                          Score 45.8; D
Pred. No. 4.7e
0; Mismatches
                                                                                                                                                                                                                                                             φ
                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                       Score 45.8; DB 6; Pred. No. 4.6e-08; ); Mismatches 2
                                                                                                                                                                                                                                                                            SD
                                              Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131
US 56
                                                                                                                                                                3igned
                                              ហ្
                                                                                                                                                                                                                                                                            ហេស
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31 bp
5641673
                                             2 bp
                                                                                                                                                                                                                                                                            \infty N
                                                                                                                                                                                                                                                                            663
dd
                                                                                                                                                                 DNA"
                                                                                                                                                                                                                                                                                                                                                                                               DNA"
                                              48
                                                                                                                                                                                                                                                                            84
                                                                                                                                 DB
, 7e-(
                                                                                                                                                                                                                                                                                                                                                                                                                                    and Goodn
                                                                                                                                                                                                       and Goodman, H.M
ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                    DNA
                                                     DNA
                                                                                                                          08;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Goodman,
                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                      Length
                                                    line
                                                                                                                          Indels
                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                             耳
                                                     ar
                                                                                                                                                                                                                                                                                                                                                                        131;
                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                             Z
                                                                                                                                          N
                                                                                            118
                                                                                                                                                                                                                                                                                                                                        49
                                                                                                           49
                                                                                                                                                                                                                                                                                                                          97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49
                                                     PAT
                                                                                                                                                                                                                                                                                    PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT
                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                        0
                                                     29-
                                                                                                                                                                                                                                                                                    29-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-OCT-1997
                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                        Gap
                                                                                                                                                                                                                                                                                    SEP-1
                                                                                                                                                                                                                                                                                    .999
                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                        0;
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                      KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                               RESULT 15
AR097441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
FEATURES
Sear
Job
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                            В
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                   Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                   Query Ma
Best Loc
Matches
  time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                             sourc
                                                                                                                                                                                                                                                                                                                                                                                                              Loc
           Com
 mpleted: Dec
: 1423 secs
                                                                                                                                                                                                                                                                                                                                                                                                              al :
                                                                                               2
                                                                                                         tch
                                            70
                                                                                                                                                                                                                                                                                                                                                           70
                                                                                                                                                                                                                                                                    AR097441
Sequence 9
AR097441
AR097441.1
                                                                                                                                                    Unclassified.

1 (bases 1 to 152)

Haseloff, J., Brand, A., Perrimon, N. and Goodmark Cell ablation using trans-splicing ribozymes

Patent: US 6071730-A 9 06-JUN-2000;

Location/Qualifiers

1. .152
                                                                                                                                                                                                                                      Unknown.
Unknown.
                                                                                   h 86.4%;
Similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 152)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,H.M.
Cell ablation using trans-splicing ribozymes
Patent: US 5849548-A 9 15-DEC-1998;
Location/Qualifiers
                                                              \mathbf{r}
                                                                                                                                                                                                                                                                                                                                                                                                  h 86.4%; Similarity 95.9%; 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                               1 GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                          December
                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .152
/organism="unknown"
/mol_type="unassigne
                                                                                                                          1. .152
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                          from
                                                                                                                                                                                                                                                                       GI:12806171
                                                                                                                                                                                                                                                                                                                                                                                                                                                       _type="unassigned DNA"
                                                                                                                                                                                                                                                                                          patent
           5,
            2004,
                                                                                  Score 45.8; DB 6;
Pred. No. 4.7e-08;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                  Score 45.8; DB 6;
Pred. No. 4.7e-08;
0; Mismatches 2
                                                                                                                                                                                                                                                                                            Sn
                                                                                                                                                                                                                                                                                                   152 bp
            07:02:45
                                                                                                                                                                                                                                                                                           6071730
                                                                                                                                                                                                       and Goodman, H.M
                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                        Length 152;
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                     Indels
                                                                                                                                                                                                                                                                                                      linear
                                                                                                         152;
                                                                                                                                                                                                                                                                                                                                                                                49
                                                                                                                                                                                                                                                                                                        PAT
                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                      14-FEB-2001
                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    Gap
                                                                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                     ;
```

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                        Minimum
Maximum
                                                                                                                                                                                                                                                                                         Run
                                                                                                                                                                                             Total number
                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                       OM nucleic
                                                                                                                              Database
                                                                                                                                                         Post-processing:
                                                                                                                                                                                                                                                                                         on:
             Pred. N
score g
and is
                                                                                                                                                                        DB
DB
                                                                                                                                                                       seq
seq
             No. is the num greater than o
                                                                                                                                                                                             0f
                                                                                                                                                                                                                                                                                                       nucleic
                                                                                                                                                                       length: length:
                                        110: ...
                                                                                                                                                                                                                                             US-09-857-841-3
53
1 gatccatggacaaa
                                                                                                                                                                                             hits satisfying chosen
                                                                                                                                                                                                                        IDENTITY_NUC Gapop 10.0 ,
                                                                                                                                          Minimum
Maximum
Listing
                                                                                                                                                                                                           4134886 seqs,
                                                                                                                                                                                                                                                                                         December
                                                                                                                              z
                                                                                                                                                                                                                                             gatccatggacaaatctgaa
                                                                                                                                                                                                                                                                                                                           Copyright
                                      Genesec, genese genese
                                                                                                                                                                                                                                                                                                      search,
                                                                                                                                                                        0
20000000000
                                                                                                                                           Match
Match
first
                                                                                                                                                                                                                                                                                       5,
                                                                                                                                                                                                                                                                                                                           GenCore
(c) 1993
                                                                                                                                                                                                                         Gapext
                                                                                                                                                                                                                                                                                        2004,
                                                                                                                                                                                                                                                                                                      using
                                                                                                                                                                                                           2624710521
                                                                                                                                           100%
45 81
                                                                                                                                                          9
                                                                                                                                            summaries
                                                                                                                                                                                                                                                                                                       S K
                                                                                                                                                                                                                                                                                         03:32:53
                                                                                                                                                                                                                          1.0
SUMMARIES
                                                                                                                                                                                                                                                                                                                           version - 2004
                                                                                                                                                                                                                                                                                                       model
                                                                                                                                                                                             parameters:
                                                                                                                                                                                                           residue
                                                                                                                                                                                                                                                                          3; Search (without a 1242.051 M
                                                                                                                                                                                                                                                                                                                           5.1.6
Compugen Ltd
                                                                                                                                                                                                                                             .gtcgtaaccgtcgacgagct
                                                                                                                                                                                                                                                                         h time 224 Seconalization cell
                                                                                                                                                                                             8269772
                                                                                                                                                                                                                                                                                        224
                                                                                                                                                                                                                                                                                        Seconds
                                                                                                                                                                                                                                                                          updates/sec
                                                                                                                                                                                                                                              53
```

eq_23Sep04:*	
seqn1980s:*	
3eqn1990s:*	
3eqn2000s:*	
eqn2001as: *	
eqn2001bs:*	
3eqn2002as:*	
eqn2002bs:*	
seqn2003as:*	
eqn2003bs:*	
seqn2003cs:*	
)seqn2003ds:*	
seqn2004s:*	
esults predicted by chance	
to the score of th	
f the total score distribut	

Result No.	Score	Query Match	Length	BB	ID	Description
1		0		ω	AAA30858	Aaa30858 Ubiquitin
2	46	86.8	771	N	34	34666 Coat pro
w				N	466	at34665 Coat pro
4.	ა	9	7	N	1046	q10461 Caps
ហ	45.8	<u>.</u>	00	N	1046	q10462 Capsid
თ	ა	9	0	ผ	6739	q67395 Caulifl
		ა	90	N	T9954	Aat99545 Cucumber
ი დ	<u>ភ</u>	ა	90	N	20750	Aaz07505 Cucumber
9	ហ	9	37	Н	8111	Aan81111 Sequence
		9.	69	N	610	107
		9	98	N	Q7610	51
	Ç	9	17	N	Q7610	5
	4	'n	J	Ŋ	3466	o
	4	U	J	N	T1725	7259 Coat
15		ω ·	N	μ	N9024	Cucum
	<b>1</b>	Ù	42	N	227	N
	<b>N</b>	0	Ó	w	5820	N
	N	0	Ú	N	0364	Aaq03641 Cucumber
	<u>.</u>	9	S	N	4174	41742 Cucumbe
	9	9	S	N	890	8908
		ა	S	N	0364	036

sequence encodes the C-terminal fragment of a ubiquitin monomer. tion relates to a method for enhancing production of a desired

The

يرمجا بالمامي

8;

Page 18; 42pp; English.

		O	O	ი	ი									Ω		Ω					a	
4 4 5 4																						
21.8	22				2		2	2	2	2	, N	2	, N	2	2	<u>N</u>	<u>ب</u>	2	<u>ہ</u>		ω ·	
41.5 41.1	1	H	<u>ب</u>	<b>.</b>	H	<b>!</b>	H	<u>, , </u>	<u>,                                    </u>	N	<u>ب</u>	N	N	2	N	N	N	<u>ب</u>		ω ·	4.	ŭ
5729 291	N	70	70	23	63	83	9	œ	0	98	126	œ	616	535	72	124	38	<del>ن</del> 8	4	O	9	C
2 2		ű	N	σ		12				ഗ	4	ហ	N	φ	N	φ	ထ	4	თ	W	N	N
ADD02790 AAX60502	254	2144	8279	7384	4201	620	M362	M3620	H5139	6852	7166	65738	3045	58251	3045	5825	6459	5966	3383	C4625	4429	C
Add02790 S. cere Aax60502 WO991423	6254 S	Aah21448 S. cere	Aaq82792 TRK1 gene	Abq73845 Rhizobium	012 Arabid	6206 Muz	6228 Mu	6208	1395 Ba	Aah68526 C glutami	9 Co.	Aah65738 C glutami	Continuation (6 o	Acc58251 Coumermy	ţ,	50	592 Pr	59663 Prop	Abk33838 Bacillus	46250 Arab	Aaq44294 Pectin	Advozova actepcoc

## ALIGNMENTS

; =-1**4** 

858 standard; DNA; 53 BP.

```
RESULT 1
AAA30858
ID AAA308
XX AAA308
XX AAA308
XX 19-SEP
XX Ubiqui
XX Ubiqui
XX Ubiqui
XX Ubiqui
XX VICOTi
XX VICOTi
XX PH Key
FT CDS
FT CDS
FT CDS
FT POduc
PR PP-PSDE
XX WPI; 2
DR PP-PSDE
XX WPI; 2
DR PP-PSDE
XX PT QUBiqui
PT Produc
PT Ubiqui
PT Produc
PT Ubiqui
PT CDS
CC This c
CC This c
CC invent
                                                     Production of desired protein in plants or ubiquitin monomer coding sequence upstream desired protein.
                                                                                                                                                                                                                    22-JUN-2000.
                                                                                                                               ₩,
                                                                                                                                                                                                                                                                                                                                                                                                                           858;
                                                                                                                                                                                                                                                                                                                             iana
                                                                                                                                                                                                                                                                                                                                                             itin
                                                                                                2000-431604/37.
B; AAY90255.
                                                                                                                                                                         C-1998;
                                                                                                                                                                                               C-1998;
                                                                                                                                                                                                                                          036129-A1
                                                                                                                                                                                                                                                                                                                                                                                itin monomer C-terminal fragment coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                      P-2000
                                                                                                                                                     INST MOLECULAR AGROBIOLOGY.
                                                                                                                                Wu J,
                                                                                                                                                                                                                                                                                                                             tabacum.
                                                                                                                                                                                                                                                                                                                                                           monomer;
                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                           Location/Qualifiers
6. .47
/*tag= a
/product= "Ubiquitin_
/partial
                                                                                                                                                                          98WO-SG000103.
                                                                                                                                                                                                98WO-SG000103.
                                                                                                                                Chen X;
                                                                                                                                                                                                                                                                                                                                                          protein production; plant
                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                      "Ubiquitin_monomer_fragment"
                                                                 plant cells by linking a of the gene encoding the
                                                                                                                                                                                                                                                                                                                                                            cell; ubiquitin promoter;
```

S

멍

```
RESULT 2
AAT34666
ID AAT3
XX AAT34666
ID AAT3
XX AAT34666
ID AAT3
XX AAT34666
ID AAT34666
ID AAT34666
ID AAT34666
ID Coat
XXX Coat
XXX Coat
XXX Coat
XXX WPI
DR PT CDS
FT 
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             monomer link
the fusion c
construct al
plant cells
                                                                        Coat protein (
mosaic virus (
infected plant
known CP seque
quash, cucumbe
infection. (Up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-OCT-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein in a plant or plant cell by inserting a nucleic acid (NA) encoding a ubiquitin monomer upstream of a NA encoding the desired protein, where the fusion construct encodes a fusion protein and expression is not controlled by the ubiquitin promoter. The invention also relates to a NA acid vector a NA vector able to transform a plant cell, that comprises NA encoding a fusion protein having a ubiquitin monomer linked to a protein of interest and further, where expression the fusion construct is not under control of a ubiquitin promoter. The construct allows enhanced production of the desired protein in plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Coat
                                                                                                                                                                                                                                                                                             WPI;
P-PSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                resi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Coat
                                                                                                                                                                                                             plants, partic. of the family resistant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9621018-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAT34666
                                                                                                                                                                                             Claim
                                           Sequence
                                                                                                                                                                                                                                                                                                                                              Boesho
                                                                                                                                                                                                                                                                                                                                                                              (ASGR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -OCT-2003
-DEC-1996
           Match
                                                                                                                                                                                                                                                                                                                                                                                                               DEC-199
                                                                                                                                                                                                                                                                                                                                                                                                                                              JUN-1995
                                                                                                                                                                                                                                                                                             ; Bd;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
stance; ss
                                                                                                                                                                                                                                                                                             1996-333993/33
)B; AAR98895.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                             24;
                                                                                         virus (CMV) wed plant tissuces CP sequences cucumber, per
                                                                                                                                                                                                                                                                                                                                             ře
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \mathbf{r}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
Similarity 100.0%;
3; Conservative
                                                                                                                                                                                                                                                                                                                                                                              ASGROW
                                                                                                                                                                                                                                                                                                                                              ÆĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Œ
                                                                                                                                                                                          Fig
                                            71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 r
                                                                         mber, peppers
(Updated on 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 andard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
(first en
                                          BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of
                                                                                                                                          (CMV)
                                                                                                                                                            (CP)
                                                                                                           tissue by
                                                                                                                                                                                             ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CP;
                                                                                                                                                                                                                                                                                                                                             Mcmaster
                                                                                                                                                                                                                                                                                                                                                                              SEED
                                                                                                                                                                                                                                                                                                                                                                                                                                             95WO-US007234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus;
                                                                                                                                                                                                                                                                                                                                                                                                               4US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifier
3. .659
/*tag= a
                                                                                                                                                                                         80pp;
                                           176
                                                                                                                                                         genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cucumber
                                                                                                                                           were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 V34
                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                               003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                           P
           98
                                                                        es of the V27, V33, V34 and A35 strain of cucumber re isolated. The CMV CP genes were isolated from by PCR amplification of cDNA using primers based the genes may be used for producing plants such as ers and tomatoes which are resistant to CMV n 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                           English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stra
                                                                                                                                                                                                                                                                                                                                              JR,
                                                                                                                                                                                                                                                                                                                                                                                                               σ
          .
88
                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13
                                           Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                              Tricoli DM,
                                                                                                                                                                                                                                            virus coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 53; DB Pred. No. 3.9e; Mismatches
          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ٠.
          core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ភ</u>
                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cucumber
                                           <u>ი</u>
          46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>;</u>
          ٠.
                                           213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
           DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CMV;
                                                                                                                                                                                                                                                                                                                                              Reynolds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ď;
                                           <del>,</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \boldsymbol{\Theta}
          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Other;
                                           □;
                                                                                                                                                                                                                                            DNA - used Solanaceae,
         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                              JF,
                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 V33;
                                          Other;
                                                                                                                                                                                                                                                                                                                                              Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               V34;
                                                                                                                                                                                                                                             to produce which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  )lant
:in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
H
                                                                                                                               ဝဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
```

RESULT
AAQ1046
ID AJ
XX
AC AJ
XX

AAQ10

461;

T 4 )461 AAQI

461

standard;

cDNA;

976

B₽.

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   日
밁
                 S
                                   Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                       known
quash
infect
                                                                                                                                                                                                                                                                                                                                                                              Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                           16-OC
                                                                      Seque
                                                                                                                                                                                                                                   Boesh
                                                                                                                                                                                                                                                                      30-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAT34
                                                                                                                                                    Claim
                                                                                                                                                                                                                                                     (ASGR
                                                                                                                                                                                                                                                                                        07-JUN-1995;
                                                                                                                                                                                                                                                                                                          11-JU
                                                                                                                                                                                                                                                                                                                           W0962
                                                    Ma
                                                                                                                                                                       t) a
                                                                                                                                                                                       μ.
                                                                                                                                                                                                          O
                                                                                                                                                                                                                                                                                                                                                                                                \alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                            T-2003
C-1996
                                                                                      protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based on CP sequences. The genes may be used for producing plants such as cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                     solated cucumber mosaic virus coat protein DNA - used s, partic. of the family Cucurbitaceae or Solanaceae, tant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      665;
                                             al
                                                     tch
                                                                                                                                                                                                        1996-333993/33.
B; AAR98894.
                                                                                                                                                                                                                                   ore ML,
                                                                                                                                                                                                                                                     -) ASGROW SEED
                                                                                                                                                                                                                                                                                                                                                                                               protein; CP; cucumber mosaic virus;
tance; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                      nce 773 BP; 175 A; 200 C; 185 G; 213 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                       C-1994;
                                                                                                                                                                                                                                                                                                                           1018-A1.
                                                                                                                                                                                                                                                                                                                                                                               ber mosaic
                                                                                                                                                    13; Fig 2; 80pp; English.
                  4
                                    46;
                                   similarity 100.0%; 16; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 100.0%; l6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                           ę
F
                                                                                                                                                                                                                                    Mcmaster
                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
3. .659
/*tag= ^
                                                                                                                                                                                                                                                                       94US-00367789
                                                                                                                                                                                                                                                                                        95WO-US007234.
                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                               virus;
                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                          V33 strain of
                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                   JR,
                                                                                                                                                                                                                                                                                                                                                                               strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
                                                                                                                                                                                                                                   Tricoli DM,
                                   Score 46; DB 2; Length (773;)
Pred. No. 4.2e-08;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 4.2e-08;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                V33
                                                                                                                                                                                                                                                                                                                                                                                                                           cucumber
                                                                                                                                                                                                                                                                                                                                                                                                         CMV;
                                                                                                                                                                                                                                    Reynolds JF,
                                                                                                                                                                                                                                                                                                                                                                                                                           mosaic
                                                                                                                                                                                                                                                                                                                                                                                                        V27;
                                                                                                                                                                                                                                                                                                                                                                                                                            virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                    Carney KJ;
                                                                                                                                                                               to produce which are
                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
;
```

```
RESULT 5
AAQ10462
ID AAQ1
XX
AC AAQ1
XX
DT 27-p
DT 25-N
DT 16-F
XX
DE Cape
XX
CMV
XX
OS Cuct
                                                                                                                                                                                            S
                                                                                                                                                              Query Match
Best Local 9
Matches 47
                                                                                                                                                                                                     to RNA 3 of the virulent strain FNY, isolated in New York on infected melons. The sequence includes a leader sequence, coding region and infected in the sequence is the same length as that of the Japanese Y strain of CMV. Transgenic melon plantlets containing the sequence introduced via an Agrobacterium tumefaciens intermediate and cultured as shoots in special media. The transformed melon plants and resistant to CMV. See also AAQ10462. (Updated on 25-MAR-2003 to correct PI field.) (Updated on 25-MAR-2003 to correct PI field.) (Updated on AUG-2003 to correct PI field.)
                                                                                                                                                                                                                                                                                                             Transgenic culture on resistant t
                                                                                                                                                                                                                                                                                                                                          WPI; 199
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-AUG-2003
25-MAR-2003
16-APR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                                                                                                                            EP412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CMV;
                 CMV;
                               Capsi
                                                                                                                                                                                                                                                                                                                                                                                               11-
                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                 Deboth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Capsid
  Cucumber
                                                                             AAQ10462;
                                                                                           AAQ10462
                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                (BIOC-)
                                              27-AUG-2003
25-MAR-2003
16-APR-1991
                                                                                                                                                                                            equence
                                                                                                                                                                                                                                                                                                                                                                                                              -AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                             -FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                              AUG-1989
                                                                                                                                                                                                                                                                                                                                          1991-046027/07
)B; AAR10652.
                                                                                                                                                                                                                                                                                                                                                                                                                                            912-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               resistance;
                                D
                 resistance;
                                                                                                                                                                                                                                                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              prot
                                                                                                                                                                                                                                                                                                                                                                Z
                                                                                                                                                            h 86.4%;
Similarity 95.9%;
47; Conservative
                               prote
                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                BIOCEM
                                                                                                                                GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                             97
                                                                                                                                                                                                                                                                                                                                                                                                                                            Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mosaic
   mosaic
                                                                                           standard;
                                                                                                                                                                                                                                                                                             Page
                                                                                                                                                                                                                                                                                                           melon plantlets specific medium to cucumber mosai
                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                               ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \mathbf{\Phi}
                                                                                                                                                                                                                                                                                                                                                                 Bentahar
                                i i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              בֹינ
                                                                                                                                                                                            B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
(revised)
(first en
                                              (revi
                                                                                                                                                                                                                                                                                              17;
                                                                                                                                                                                                                                                                                                                                                                                SA
                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                              90EP
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifier
75. .731
/*tag= a
/product= "CMV str
                                                                                                                                                                                                                                                                                                                                                                                               9FR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus
   virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              capsid
                                                                                                                                                                                             224
                capsid
                                              ised)
lsed)
st en
                                                                                                                                                                                                                                                                                             44pp;
                                                                                           DNA;
                                                                                                                                                                                                                                                                                                                                                                                                              -00402282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엱
                               o
f
                                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                               00010848
                                                                                                                                                                                             P
                                                                                                                                                                                                                                                                                                              mosaic
                                Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cucumber
                                                                                            1007
                                                                                                                                                                                                                                                                                                                                                                 Noe1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein;
                 protein;
                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                               French.
                                                                                                                                                                                                                                                                                                                    prodn.
for ne
                                                                                                                                                               <u>o</u>
                                                                                                                                                                                             O
                                                                                                                                                             Score 45.8;
Pred. No. 5.
0; Mismatche
                                                                                                                                                                                                                                                                                                                                                                ζ
                                                                                            ВÞ
                                                                                                                                                                                                                                                                                                              virus
                                                                                                                                                                                                                                                                                                                    new
                                                                                                                                                                                            230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mosaic
                                Mos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cucumis
                                                                                                                                                                                                                                                                                                                                                                                                                                                           rain
                 Cucumie
                                                                                                                                                                                                                                                                                                                                                                 Perret
                                                                                                                                                                                                                                                                                                                    from transformed shoots transformed plants etc
                                                                                                                                                                                            <u>ი</u>
                                 aı.
                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ANG
                                                                                                                                                                                             273
                               Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Virus
                                                                                                                                                                                                                                                                                                                                                                <u>ب</u>
                                                                                                                                                              .3e-(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                melo;
                 melo;
                                                                                                                                                                                             ij
                                                                                                                                                                             DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          capsid
                                                                                                                                                              08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8t
                                Bt
                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rain
                                                                                                                                                                                             Ų;
                 a
                                 rain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                            Length 976
                                                                                                                                                                                             0
                                                                                                                                                              Indels
                                 117F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ANG
                                                                                                                                                                                             Other
                                                                                                                                                                                                                   003 to correct
(Updated on 27
                                                                                                                                 118
                                                                                                                                                49
                                                                                                                                                                                                                                                                                                                           Λq
                                                                                                                                                                                                                                                                                                                     qaə
                                                                                                                                                              0
                                                                                                                                                                                                                                                                       complementa
                                                                                                                                                                                                                                                                                                                           two=
                                                                                                                                                               Gap
                                                                                                                                                                                                                                                         d 3'
                                                                                                                                                                                                                                  are
                                                                                                                                                                                                                                         are
                                                                                                                                                                                                                                                                                                                           stag
                                                                                                                                                               Ŵ
                                                                                                                                                                                                                                                                 non
                                                                                                                                                                                                                                                                               Ź
                                                                                                                                                                                                                                                                                                                            æ
                                                                                                                                                               0
```

```
RESULT 6
AAQ67395
ID AAQ673
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                  멂
                                                                                                                                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                               via ar
specia
also p
25-MAR
field.
                                                                                                                                                                                                                                                                                                                                                                    by stathe casequer
                                                                                    polyr
                                                                                            Cauli
                                                                                                                Cauli
                                                                                                                                   25-MAI
12-API
                                                                                                                                                                                                                                                                                                            Seque
                                                                                                                                                                                                                                                                                                                                                                                                                   The plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Transocultus
resist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI;
P-PSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-AU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
CDS
                                                                 Caul
                                                                                                                                                               AAQ67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP412
                                      Key
                                                                                                                                                                                                                                                                                                                                                                                                           was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-
  FR270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Debot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BIOC
                                                                                                                                                                                                                                                                                          Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FE
                                                                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                                              E G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D
                                                                   μ.
                                                                                                                                                                                                                                                                                 Ô
                                                                                                                                                                                                                                                                                                                                      yene was isolated from the virulent French strain 117F of CMV. Tomato clets at the 2-leaf stage were infected with CMV strain 117F. 15 days infection, the virus was purified from the infected leaves and cDNA synthesised from RNAs 1,2,3 and 4. After purification and selection and and selection candard techniques, cDNA complementary to RNA 4 was found to encode capsid protein. It was recloned into "Blue scribe" plasmids and enced. Transgenic melon plantlets containing the sequence introduced in Agrobacterium tumefaciens intermediate are cultured as shoots in lal media. The transformed melon plants are resistant to CMV. See AAQ10461. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 28-MAR-2003 to correct PA field.)
                                                                                                                                   R-2003
R-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z,
                                                                                                                                                                 395;
                                                                                                                                                                                                                                                                                 al a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           genic melon plantlets prodn. from transformed shoots - re on specific medium for new transformed plants etc., tant to cucumber mosaic virus.
 1960-A1.
                                                                  flower mosaic virus
                                                                                    ibozyme;
                                                                                             flower mosaic virus;
                                                                                                                  flower
                                                                                                                                                                                  395 standard; DNA; 1007
                                                                                                                                                                                                                                                                                                              nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1991-046027/07.
B; AAR10653.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -) BIOCEM SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              912-A.
                                                                                                                                                                                                                                   49
                                                                                                                                                                                                                                                                                                                                                                                                                                                         16; Page 19; 44pp; French.
                                                                                                                                                                                                                                                                     Similarity 95.9%; 17; Conservative
                                                                                                                                                                                                                                  GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                              1007 BP; 227 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bentahar
                                                                                                                 mosaic
                                                                                                                                   (revised)
(first ent
                                                                                     inactivate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
54. .710
/*tag= a
/product= "CMV strai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89FR-00010848.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90EP-00402282
                           54. ./ı
/*tag=
                                     Location/Qualifiers 54. .710
                   /product=
                                                                                                                virus capsid protein coding sequence.
                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Noe1
                                                                                                                                                                                                                                                                                                              259
                                                                                     CMV; capsid protein; coat inactivation; resistance;
                   "Capsid protein."
                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                       Score 45.8; D
Pred. No. 5.4e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Z,
                                                                                                                                                                                                                                                                                                              C; 247 G; 274 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 strain 117F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Perret
                                                                                                                                                                                                                                                                                DB 2;
.4e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                capsid
                                                                                                                                                                                                                                                                                          Length 1007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein"
                                                                                                                                                                                                                                                                         Indels
                                                                                     protein;
crop protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                by two=stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        egp
                                                                                                                                                                                                                                                                        ,
,
                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                        ?
```

```
RESULT
AAT9954
ID AA
XX
                                                                                                                                                                                                               8
                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                     Ma Be
                                                                                                                                                                                                                                                                     The RNA encoding the capsic targetted by a nucleic action polyribozyme has endoribont gene encoding the viral capseveral catalytic regions dresistance to virus. See AAPN field.)
                                                                                                                                                                                                                                     lery Ma
et Loc
tches
                                                                                                                                                                                                                                                                                                                            sequence -
of pr
                                                                                                                                                                                                                                                                                                                                                     WPI; 199
P-PSDB;
                                                                                                                                                                                  T 7
9545/C
AAT995
                                                                                   CDS
                                                                                             Key
3'UTR
                                                                                                                                                                                                                                                                                                                                                                                  (GENE
                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                   02-
                                                                                                                         Transgenic plant; coat protein; ant
                                                                                                                                                      25
21
                                                                                                                                                                                                                                                                                                                                                                      Lenee
                                                                                                                                                                                                                                                                                                                                                                                             26
                                                                 sig_peptide
                                                                                                                                                                       AAT99545
                                                promot
                                                                                                               Cucumbe
                                                                                                                                                                                                                                                                                                                    Disclosure;
                                                                                                                                           Cucumber
                          P806
               Ŋ
                                                                                                                                                                                                                                                           Φ
                                                                                                                                                      S-MAR-2003
L-MAY-1998
                                                                                                                                                                                                                                          Loca
               -NOV-
    -MAY-1997;
                                                                                                                                                                                                                                                           quence
                                                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                                                             FEB-1993
                                                                                                                                                                                                                                                                                                                                                                                                                   SEP-1994
                                                                                                                                                                                                                                                                                                                                                           1994-
                                                                                                                                                                                                                                                                                                                                                                     ָּם,
                          81
                                                                                                                                                                                  45
                                                                                                                                                                                                                                                                                                                                                                                                       1993;
               1997
                                                                                                                                                                                                                                   similarity 95.9%;
47; Conservative
                                                                                                                                                                                                                                                                                                                               virus
                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                  GENE
                                                                                                                                                                                                                                                                                                                                                     4-281767/3
AAR57968.
                                                                                                                                           mosa
                          A2
                                                                                                               司の
                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                      GATCCATGGACAAATC
                                                                                                                                                                                                                                                           007
                                                                                                                                                                                                                                                                                                                                                                      Perez
                                                                                                               89
                                                                                                                                                                                                                                                                                                                                     can inacti
                                                                                                                                                                                                                                                                                                                                                                                            ٠.
                                                                                                                                                                                                                                                                                                                   Fig
                                                                                                               i
C
                                                                                                                                           C
                                                                                                                                                      (revi
                                                                                                                                                                                                                                                                                                                               resistant
                                                                                                                                                                                                                                                                                                                                                                                  SHEARS
                                                                                                                                                                                                                                                           ₿P;
                                                                                                                          antisens
                                              .958
/product= "
/product= "
956. .1029
/*tag= c
/note= "~
1030
                                                                                                                                                                                                                                                                                                  g the capsid
                                                                                                                                                                                                                                                                                                                                                                                                        93FR-
    97EP-00201379
                                                                                              Location/
1. .299
                                                                                                                                            virus
                                                                                                                                                                                                                                                                                                                    ₩
•
                                                                                                               virus
                                                                                                                                                                                                                                                                                                                                                                      ָם,
                                    1030. .
/*tag=
/note=
                                                                                                                                                                                                                                                                          the capsid protein of cauliflower mosaic virus can lucleic acid sequence called a "polyribozyme". The endoribonuclease activity and is able to inactivate e viral capsid protein. The polyribozyme comprises c regions derived from ribozymes and confers completerus. See AAQ67391-94. (Updated on 25-MAR-2003 to corp
                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                             FR
                                                                                                                                                            .sed)
                                                                                                                               virus
                                                                                                                                                                                                                                                           227
                                                                                                                                                       ct
                                                                                                                                                                                                                                                                                                                                                           ū
                                                                                                                                                                                  CDNA;
                                                                                                                                                                                                                                                                                                                   67pp;
                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                  YTq
                                                                                                                                                                                                                                                                                                                                                                                             00002269
                                                                                                                                                                                                                                                                                                                                                                                                         00002269
                                                                                                                                                                                                                                                                                                                                                                       Gruber
                                                                                                                                                                                                                                                                                                                                     yat.
                                                                                                                                           RNA-
                                                                                                                          Ø
                                                                                                                                                                                                                                                           P
                                                                                                                                                                                                                                                                                                                    gene for viral fransgenic pl-
                                                                                                                                                                                                                                                                                                                               ct
                                                                                                                          gene;
                                                                                                                                                                                                                                                                                                                                                                                  GLT
                                      ıηQ
                                                                                                                               resi
                                                                                        Ф
                                                                                                   /Qua
                                                                                                                                                                                                                                                           25
                                                                                                                                                                                  106
                                                                                                                                                                                                                     TGAATCAACCAGTGC
                                                                                                                                           w
                                     seque
                                                                                                                                                                                                                                                                                                                                                                      ζ,
                                                                       coat
                                                                                                                                                                                                                                                            φ
                                                                                                                                                                                  S
                                                                                                                                                                                                                                     0
                                                                                                                               stance;
                                                                                                                                           CDNA
                                                                                                                                                                                                                                    Score 45.8;
Pred. No. 5.4
0; Mismatches
                                                                                                                                                                                                                                                           Ç
                                                      D
                                                                                                   f
                                                                                                                          88
                                                                                                                                                                                   ВP
                                                      rot
                                      ü
                                                                                                                                                                                                                                                                                                                                                                       Baudot
                                                                                                    ers
                                                                                                                                                                                                                                                           247
                                                                       protei
                                      Φ
                                                       ው
                                                                                                                                          fragmen
                                                       ijņ
                                      0
                                                                                                                                                                                                                                                           Ü
                                                                                                                                disease
                                      Ħ
                                                       le
                                                                                                                                                                                                                                                                                                                                                                      <u>ن</u>
                                      due
                                                       ader
                                                                                                                                                                                                                                                            Ŋ
                                                                                                                                                                                                                                     .4e-
                                                                                                                                                                                                                                                           74
                                                                                                                                                                                                                                                                                                                              c regions
capsid p
, also DN
                                                                                                                                                                                                                                                DB
                                     genomi
                                                                                                                                                                                                                                                                                                                                                                       Ollivo
                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                    08;
                                                                                                                                resistance;
                                                       ø
                                                      equence
                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                           Ų,
                                                                                                                                                                                                                                                                                                                                    protein, esp.
                                      Ω
                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                Length
                                     promoter"
                                                                                                                                                                                                                                                           O
                                                                                                                                                                                                                                                                                                                              sequence
                                                                                                                                                                                                                                                           Othe:
                                                                                                                                                                                                                      CGACG
                                                                                                                                                                                                                                     Ö
                                                                                                                                                                                                                                                1007;
                                                                                                                                RNA
                                                                                                                                                                                                                          49
                                                                                                                                                                                                               97
                                                                                                                               virus;
                                                                                                                                                                                                                                                                                                                               encoding
                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                     for
                                                                                                                                                                                                                                                                                                                                          ary
                                                                                                                                                                                                                                     Ga
                                                                                                                                                                                                                                                                                                                                    pre
                                                                                                                                                                                                                                     Ö
                                                                                                                                (MY)
                                                                                                                                                                                                                                                                                                         þe
                                                                                                                                                                                                                                                                             rect
                                                                                                                                                                                                                                                                                  Œ
                                                                                                                                                                                                                                                                                              t
b
                                                                                                                                                                                                                                                                                                                               pn.
                                                                                                                                                                                                                                                                                              Ō
                                                                                                                                                                                                                                     0;
```

4

1997-538620/50.

```
RESULT 8
AAZ07505/c
ID AAZ075
XX
AC AAZ075
XX
DT 26-NOV
XX
DE Cucumb
XX
CMV; F
XX
OS Cucumb
XX
PN US5959
XX
PF 09-MAY
XX
PF 09-MAY
XX
PF 09-MAY
XX
PF Cellir
XX
PI Cellir
XX
DR WPI; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contrelation plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from thave tresist within antise antise of place
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the seque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Prepa
anti:
from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (META
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the subgenomic promoter of viral RNA, the coat protein gene, its leader sequence, and the tRNA-like 3'-terminal region of RNA-3. It was prepared y amplifying a fragment of CMV cDNA-3 from clone pCR-CMVIRNA3 by PCR (see also AAT99548-49). The gene construct is introduced into a vector containing a promoter active in plant cells in antisense orientation relative to the promoter. A claimed recombinant vector comprises the lant promoter, the antisense gene construct and a terminator which is unctional in the plant. In addition to CMV, viral RNA may also be used rom tobacco mosaic virus and potato virus. Claimed transgenic plants ave the antisense gene construct integrated into their genomes. They are esistant to viral infection. In particular, they are resistant to CMV. ithin the antisense gene construct, the interfering activity of the ntisense redomain of the sub-genomic promoter, associated with the ntisense activity performed by the coat protein gene, allows production f plants having 100% resistance to CMV. (Updated on 25-MAR-2003 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                              င်ဝင်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        am
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ō
                                                                                                                                                                                                                                                                                                          505;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ring transgenic plants resistant sense gene constructs containing cucumber mosaic virus.
                                                                                          Y-1996;
                                                                                                                                                                     9181-A.
                                                                                                                                                                                                                  genic plant; RNA virus; antisense construct; c
promoter; coat protein gene; infection; RNA-3;
                                                                                                                                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                              al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nce 1066 BP; 299 A; 251 C; 273 G; 243 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ni F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Y-1996;
                                                                 -) METAPONTUM AGROBIOS
                                                                                                                   Y-1997;
                                                                                                                                           P-1999.
                                                                                                                                                                                             ber mosaic
                                                                                                                                                                                                                                                                                  V-1999
                                                                                                                                                                                                                                                                                                                                   505 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1997-538620/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -) METAPONTUM AGROBIOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 47;
                                                                                                                                                                                                                                                                                                                                                                                                                          μ
                                      ,
A
                                                                                                                                                                                                                                                                                                                                                                                                                                              1 86.4%;
Similarity 95.9%;
17; Conservative
                                                                                                                                                                                                                                                          mosaic
                                                                                                                                                                                                                                                                                                                                                                                               GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 10; 18pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grieco PD;
                                         Grieco
                                                                                                                                                                                                                                                                                  (first entry)
                                                                                          96IT-MI000927.
                                                                                                                   97US-00854170.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96IT-MI000927.
                                                                                                                                                                                             virus.
                                                                                                                                                                                                                                                          virus
                                       PD;
                                                                                                                                                                                                                                                                                                                                  CDNA;
                                                                                                                                                                                                                                                          (CMV) RNA-3
                                                                                                                                                                                                                                                                                                                                    1067
                                                                  SCRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCRL.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 45.8; DB 2;
Pred. No. 5.4e-08;
); Mismatches 2;
                                                                                                                                                                                                                                                                                                                                    ₿₽.
                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to RNA virus infection the viral coat protein
                                                                                                                                                                                                                                                          cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1066;
                                                                                                                                                                                                                                cucumber
                                                                                                                                                                                                                                                          fragment
                                                                                                                                                                                                                                 mosaic
                                                                                                                                                                                                                                                                                                                                                                                                  913
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                 virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e.g.
```

0;

s resistant containing

to RNA virus infection the viral coat protein

protein

gene,

ġ

using

nse gene an F domain

cmy conditions

<u>.</u>

1

```
FFFXXXOSSSSSSSSSSSSXX
RESULT 9
AAN81111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                construct into the plant g of a subgenomic promoter from the subgenom.

CMV; (c)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to preparing transgenic plants resistant to RNA virus induced infections that comprises integrating an antisense gene construct into the plant genome. The construct comprises: (a) an F domain of a subgenomic promoter of cucumber mosaic virus (CMV); (b) downstream from the subgenomic promoter, a leader sequence of a coat protein gene of CMV; (c) downstream from the leader sequence, a gene encoding a CMV coat protein; and (d) downstream from the gene, a 3'-terminal region of a CMV coat protein gene. The method is useful for producing plants which are resistant to infection by RNA based viruses. The gene construct gives higher levels of resistance compared to antisense constructs which are capable of complementing with different domains of genomic RNA of CMV. The present sequence represents the fragment of cDNA clone of RNA-3 of CMV. This forms the antisense construct of the invention
                                                          WPI; 198
P-PSDB;
                                                                                                                              20-FEB-1
25-FEB-1
18-FEB-1
                                                                                                                                                                                                                                                    Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                             DNA
                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                              25-MAR-2003
12-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Preparing transgenic plants anti:sense gene constructs from cucumber mosaic virus.
                                                                                                                                                                                                             EP279433-A.
                                                                                                                                                                                                                                                                                                                                                                           AAN81111;
                                                                                                                                                                                                                                                                                                                                                                                              AAN81111
         Disclosure;
                                                                                        Furusawa
                                                                                                            (TAKE
                                                                                                                                                                       18-FEB-1988;
                                                                                                                                                                                          24-AUG-1988
                                                                                                                                                                                                                                                                                                       Cucumber
                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                            coding for producing p
                                                                    1988-236708/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>..</u>
۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                              1987;
1987;
1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 95. 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1
                                                                                                          TAKEDA
                                                           AAP80509
                                                                                        H,
                                                                                                                                                                                                                                                                                                      mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1067
                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGTCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                         contg.
        Page
                                                                                                                                                                                                                                                                                                                                             (revised)
                                                                                        Onda H,
                           r the coat plants res
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B₽;
                                                                                                                              87JP-00038288.
87JP-00043443.
88JP-00035809.
                                                                                                            CHEM
                                                                                                                                                                                                                               Location/Qualifiers
418. .1074
/*tag= a
/label= cucumber mo
                                                                                                                                                                       88EP-00102322
                                                                                                                                                                                                                                                                                                     virus;
                                                                                                                                                                                                                                                                                                                          CMV
        ~
``
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297
                                                                                                                                                                                                                                                                                                                                                                                               DNA;
                                                                                                                                                                                                                                                                                                                          strain
        20pp;
                                                                                                            UNI
                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86.4%;
95.9%;
                             at protein resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English
                                                                                        Komiya
                                                                                                                                                                                                                                                                                                      plant
                                                                                                                                                                                                                                                                                                                                                                                               1379
                                                                                                            UTJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              250
          English
                                                                                                                                                                                                                                                                                                                           ĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 45.8; D
Pred. No. 5.4e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                          coat
                                                                                        H,
                                                                                                                                                                                                                                                                                                       viral
                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              276
                                      0f
                                                                                                                                                                                                                                 mosaic
                                                                                                                                                                                                                                                                                                                          protein
                              cucumber
                                                                                                                                                                                                                                                                                                      resistance;
                                       cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ດ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
5.4e-08;
2;
                                                                                                                                                                                                                                 virus-Y
                                                                                                                                                                                                                                                                                                                          gene
                              r mosaic v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             년
'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                       88
                                                                                                                                                                                                                                 coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                             virus :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Other;
```

strain Y infection

ĸ

used

protei T1, ha gense invadi tobacc

```
RESULT 10
AAQ76107
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    natural plan
DNA, is show
also AAN8111
25-MAR-2003
                                                                                                                                                  WPI; 1
                                                                                                                                                                                                                                                                                                                                                                                                            cucumber mosaic virus; tomato mosaic virus; minus-strand RNA; virus resistance; disease resistance; transgenic plant; cross hypersensitive response; crop improvement; tomato; Lycopersicon esculentum; tobacco; Nicotiana tabacum; RNase T1; cell inhibitory protein; ToMV: cmV: es
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAQ76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This DNA is produced on screening of a plasmid library and is used to transform plant cells which subsequently produce the coat prot- ein of cucumber mosaic virus (CMV) strain Y. This protein is not synthesised in natural plant cells. The resistance to CMV infect- ion, provided by the DNA, is shown in plant cells and redifferent- iated plant bodies. See also AAN81110. (Updated on 25-MAR-2003 to correct PR field.) (Updated on
                                                                                                                                                                                                                                                                                                                 W0942
                                                                                                                                                                                                                                                                                                                                                          Key
CDS
                                                                                                      DNA constructs for imparting pathogen, esp. encodes RNA that interacts with viral RNA peliciting agent.
                                                                                                                                                                                                      (SANO
(SANO
(SANO
                                                                                    Claim
                                                                                                                                                                                   De Haan PT;
                                                                                                                                                                                                                                                 04-JU
                                                                                                                                                                                                                                                                      03-JUN-1994;
                                                                                                                                                                                                                                                                                            22-DEC-1994.
                                                                                                                                                                                                                                                                                                                                                                                          Cucumb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAQ76107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Loca
                                                               chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ∴ch
:al
                                                                                                                                                                                                                                                                                                                9464-A1
        meric cucumber mosaic virus RNA-3 (given in AAQ76107) has the coat in gene replaced by a gene encoding a cell inhibitory protein, RNasaving the sequence given in AAR67754. The construct elicits a minus RNA that interacts with the RNA-dependent RNA-polymerase of an ing virus, thus conferring virus-resistance on a host plant, e.g. co, tomato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                          ber
                                                                                                                                                                                                                                                 V-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ĕr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                  995-036490/05; AAR67754.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                       SANDOZ LTD.
SANDOZ PATENT GMBH.
SANDOZ-ERFINDUNGEN
                                                                                   Page
                                                                                                                                                                                                                                                                                                                                                                                          mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGTCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1379 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86.4%; larity 95.9%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
(first en
                                                                                   31-32;
                                                                                                                                                                                                                                                  93GB-
                                                                                                                                                                                                                                                                      94WO-EP001817.
                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
123. .437
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                            virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virus
                                                                                                                                                                                                                                                                                                                                      /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                  50pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PA field.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342
                                                                                                                                                                                                                                                                                                                                       "RNase
                                                                                                                                                                                                        VERW
                                                                                   English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chimera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 45.8; D
Pred. No. 5.7e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 333
                                                                                                                                                                                                        GES
                                                                                                                                                                                                                                                                                                                                     T1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45.8; DB 1;
No. 5.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O.
                                                                                                                                                                                                         MBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  398
                                                                                                                  polymerase to generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <del>)</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       о
``
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Updated on
                                                                                                                                                                                                                                                                                                                                                                                                                                               protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                     plant
an
```

Company of

106

49

**.** 

Gaps

0

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QS
Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Que:
Bes
Mat
                                                                                                                              WPI; 199
                                         A chimeric cucumber mosaic virus RNA-3 (given in AAQ76106) codes for the coat protein (CP) of tomato mosaic virus (AAR67752) as well as its own CP (AAR67753). The construct elicits minus-sense RNA that interacts with the RNA-dependent RNA-polymerase of an invading virus, thus conferring virus-resistance on a host plant, e.g. tobacco, tomato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                        Claim
                                                                                                    DNA constructs for imparting patencodes RNA that interacts with eliciting agent.
                                                                                                                                                                                                                                                                                                                                                                                            T 11
106
AAQ76
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ches
                                                                                                                                                                                                                              60₩
                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                          Key
CDS
                                                                                                                                                                                                                                                                                                         Cucumber mosaic virus; tomato mosaic virus; minus-st virus resistance; disease resistance; transgenic plantypersensitive response; crop improvement; tomato; Lycopersicon esculentum; tobacco; Nicotiana tabacum; ToMV; CMV; ss.
                                                                                                                                                 De
                                                                                                                                                             (SANO
(SANO
(SANO
                                                                                                                                                                                                    03-
                                                                                                                                                                                                                 22-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                       04-JUN-
                                                                                                                                                                                                                                                                                              Cucumber
                                                                                                                                                                                                                                                                                                                                                Cucumber
                                                                                                                                                                                                                                                                                                                                                                                AAQ76106
                                                                                                                                                                                                                                                                                                                                                             25-MAR-2
                              equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               equence
          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                 Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mat
                                                                                                                                                  Haan
                                                                                                                                                                                                                 DEC
                                                                                                                                                                                                    JUN-1994
                                                                                                                                                                                                                              29464-
                                                                                                                                     19
                                                                                        υ
•
                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                 -1994
   Similarit
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 Similarit
                                                                                                                                                                                                                                                                                                                                                             .2003
.1995
                                                                                                                                                                                       1993
                                                                                                                                    95-
                                                                                                                                                                                                                                                                                                                                                                                             ത
                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                             SANDOZ
SANDOZ
SANDOZ-
                                                                                                                             5-036490/05.
AAR67752, AAR67753
                                                                                                                                                  PT;
                              18
                                                                                        Page
                                                                                                                                                                                                                                                                                                                                                mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                            mosaic
                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                             (revised)
(first entry)
                              ₽P;
                                                                                        27-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B₽;
                                                                                                                                                             PATENT GMBH.
-ERFINDUNGEN V
                                                                                                                                                                                       93GB-
                                                                                                                                                                                                    94WO-EP001817
                                                                                                                                                                                                                                                                  Location/Qualifie
123. .600
/*tag= a
                                                                                                                                                                                                                                        123. .600

/*tag= a

/product= "

895. .1550

/*tag= b

/product= "
                                                                                                                                                                                                                                                                                             virus
                                                                                                                                                                                                                                                                                                                                                virus RNA-3
          Ž
    Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                      y
ervat
     rvat
                              448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ü
                                                                                                                                                                                                                                                                                                                                                                                             DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87
                                                                                                                                                                                       00011593
    95.
95.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      95.
95.
                                                                                         U
                                                                                       ; qq0
                             A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P
          44.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 9 %
                                                                                                                                                                                                                                                                                                                                                                                             18
                              429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                413
                                                                                                                                                                                                                                           "CMV
                                                                                                                                                                                                                                                                                                                                                                                             ä
                                                                                                                                                              VERW
                                                                                       English
                                                                                                                                                                                                                                                                                                                                                                                             0
   Score 45.8; D
Pred. No. 6.1e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                chimera
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 45.8; I
Pred. No. 6e-0
0; Mismatches
                             Ç
                                                                                                                                                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O
                                                                                                                                                                                                                                           coat
                                                                                                           chogen,
viral
                                                                                                                                                              GES
                                                                                                                                                                                                                                                              coat
                              431
                                                                                                                                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ø
                45.
                                                                                                                                                              HBM
                                                                                                                                                                                                                                                                                                                                                encoding
                              <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>
                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                             protein"
                                                                                                           RNA p
                              552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07
           1e-
                 DB
                                                                                                          ). virus, resistance to polymerase to generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                            , 80
80
80
                             );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.
           0 2
                                                                                                                                                                                                                                                                                                                                                 TOMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
    N -- --
                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                             ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ď;
                                                                                                                                                                                                                                                                                                                           s-strand
plant; c
                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                 GP
                                                                                                                                                                                                                                                                                                                                                                                                                                       CGTCGACG
    Indels
                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O
                                                                                                                                                                                                                                                                                                                 coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Othe
                              Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1696;
                                                                                                                                                                                                                                                                                                                             cross
                                                                                                                                                                                                                                                                                                                                   RNA;
                 œ
                                                                                                                                                                                                                                                                                                                prot
                 σ
                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                          49
    <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
•
                                                                                                                                                                                                                                                                                                                             protection;
                                                                                                                                                                                                                                                                                                                 ein;
                                                                                                           \Phi O
    Gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gap
                                                                                                            plant
an
                                                                                                                                                                                                                                                                                                                 CP
    \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ö
                                                                                                                  Ø
     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 12
AAQ76108
ID AAQ761
XX
                                                                          밁
                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                     Query Ma
Best Loc
Matches
                                        est
                                                                                                                                                                                                                                                                                                                                                                                                                                              cucumber mosaic virus; tomato mosaic virus; minus-strand RNA; virus resistance; disease resistance; transgenic plant; cross proter hypersensitive response; crop improvement; tomato; Lycopersicon esculentum; tobacco; Nicotiana tabacum; P30; elicitor; CMV; ss.
                                                                                                                                                             Claim
                                                                                                                                                                            DNA constructs for imparting pathogen, esp. encodes RNA that interacts with viral RNA peeliciting agent.
                                                                                                                                                                                                                    WPI;
P-PSI
                                                                                                                                                                                                                                                                                                                                                              WO942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAQ76
                                                                                           A chimeric cucumber mosaic virus RNA-3 (given in AAQ76108) has the coat protein gene replaced by a gene encoding an elicitor, ToMV P30, having the sequence given in AAR67755. The construct elicits a minus-sense RNA that interacts with the RNA-dependent RNA-polymerase of an invading virus, thus conferring virus-resistance on a host plant, e.g. tobacco, tomato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                               De
                                                                                                                                                                                                                                                                                                                                                                                                   Key
                                                                                                                                                                                                                                                                (SANO
(SANO
(SANO
                                                                                                                                                                                                                                                                                                                         03-
                                                                         Sequence
                                                                                                                                                                                                                                                                                                       04-JU
                                                                                                                                                                                                                                                                                                                                                                                                                              Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cucumber mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                                                            22-DEC-1994.
                                             Loca
                                                       Mat
                                                                                                                                                                                                                                                Ha
                                                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     108;
 205
                                                                                                                                                                                                                                                an PT;
                                                                                                                                                                                                                                                                                                                                                               9464-A1.
                                                                                                                                                                                                                                                                                                       v-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                     995-036490/05; AAR67755.
                                              Similarity
                                                                                                                                                                                                                                                                 SANDOZ LTD.
SANDOZ PATENT GMBH.
SANDOZ-ERFINDUNGEN VERW GES MBH.
GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                          2173 BP;
                                                                                                                                                             Page 34-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                     86.4%;
larity 95.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
(first en
                                                                                                                                                                                                                                                                                                        93GB-00011593
                                                                                                                                                                                                                                                                                                                          94WO-EP001817.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virus RNA-3
                                                                                                                                                                                                                                                                                                                                                                               123. .914
/*tag= a
/product=
                                                                                                                                                                                                                                                                                                                                                                                                                               virus
                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                          561 A; 438 C; 532 G; 642 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                            50pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2173
                                                                                                                                                                                                                                                                                                                                                                                 "ToMV
                                                                                                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chimera encoding
                                     <u>.</u>
                                     Score 45.8; DB 2;
Pred. No. 6.3e-08;
); Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP.
                                                                                                                                                                                                                                                                                                                                                                                 P30
                                                                                                                                                                                                                                                                                                                                                                                 elicitor"
                                                                                                                                                                                       polymerase to generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOMV
                                                                           □;
                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P30
                                      Indels
                                                                            0 Other;
                                                         2173;
1253
                    49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49
                                      <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protection;
                                      Gaps
                                                                                                                                                                                          plants
an
                                      0
```

RESULT 1: AAT34664

```
RESULT 1
AAT17259
ID AAT
XX
AC AAT
XX
AC AAT
XX
DT 16-
DT 02-
XX
DE Coa
XX
Coa
XX
Cuc
XX
Cuc
                                                                                                                                                                                                     밁
                                                                                                                                                                       Query Match
Best Local S
Matches 45
                                                                                                                                                                                                                                                                                                                       WPI; 199
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Coat
                                                                                                                                                                                                                    Coat protein (CP) genes of the V27, V33, V34 and A35 strain of comosaic virus (CMV) were isolated. The CMV CP genes were isolated infected plant tissue by PCR amplification of cDNA using primers known CP sequences. The genes may be used for producing plants so quash, cucumber, peppers and tomatoes which are resistant to CMV infection. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                         New isolated cucumber mosaic plants, partic. of the family resistant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
CDS
                                               Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-OCT-2003
02-DEC-1996
                                                             16-OCT-2003
02-DEC-1996
                                                                                    AAT1725
                                                                                                   AAT17259
                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                           WO9621018-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coat protein; resistance; s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAT34664
                       Coat protein; resistance; s
                                                                                                                                                                                                                                                                                                                                                Boeshore
                                                                                                                                                                                                                                                                                                                                                                              30-DEC-
                                                                                                                                                                                                                                                                                                                                                                                             07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                            11-JUL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAT3466
         Cucumber
                                                                                                                                                                                                                                                                                                                                                              (ASGR-) ASGROW
                                                                                                            14
9
                                              protein
                                                                                                                                                                                                                                                                                                                        1996-333993/33
B; AAR98893.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                           <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                            1996
                                                                                                                                                                                                                                                                                                                                                                              1994;
                                                                                                                                                                       Similarity 97.8%;
45; Conservative
                                                                                    9
                                                                                                                                                        4
                                                                                                                                                                                                                                                                          Fig
                                                                                                                                                                                                                                                                                                                                              MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mosaic
                                                                                                                                        CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
         mosaic
                                                                                                   standard;
                                                                                                                                                                                                      772
                        98
                                                                                                                                                                                                                                                                          1; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first en
                                               0f
                                                             (revised)
(first en
                                                                                                                                                                                                     BP; 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CP;
                              CP;
                                                                                                                                                                                                                                                                                                                                               Mcmaster
                                                                                                                                                                                                                                                                                                                                                               SEED
                                                                                                                                                                                                                                                                                                                                                                              94US-00367789
                                                                                                                                                                                                                                                                                                                                                                                             95WO-US007234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
3. .659
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cucumber
                              cucumber
                                                                                                   DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA;
                                                                                                                                                                                                                                                                                                                                                               ၀
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               V27
                                               A35
                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                     A;
                                                                                                                                                                                                                                                                                                                                              JR,
         \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              strain
                                                                                                   772
                                                                                                                                                                                                      202
                                               strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     772
         ra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mosaic
                                mosaic
                                                                                                                                                                                                    Ç
                                                                                                   ВP
                                                                                                                                                                       Score 44.4;
Pred. No. 1.8
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВР
         5
                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                Tricoli
                                                                                                                                                                                                                                                                                                 virus coat protein DNA
/ Cucurbitaceae or Solar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         V27
                                               Of
f
                                                                                                                                                                                                      182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cucumber
                               virus;
                                               cucumber
                                                                                                                                                                                                    G;
                                                                                                                                                                                                                                                                                                                                              DM,
                                                                                                                                                                                                     211 T;
                                                                                                                                                                      DB 2;
1.8e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CMV;
                               CMV;
                                                                                                                                                                                                                                                                                                                                               Reynolds
                                               mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mosaic
                                                                                                                                                                                                       0
                               V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                V27; V33;
                                                                                                                                                                                                    u;
                                                                                                                                                                                                                                                                                                 Solanaceae,
                                                                                                                                                                                     Length 772;
                                                                                                                                                                                                                                                                                                                                              JF,
                                                                                                                                                                                                      0
                                               virus
                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virus
                                                                                                                                                                                                                                         35 strain of cucumber were isolated from using primers based
                               V33;
                                                                                                                                                                                                      Other;
                                                                                                                                                                                                                                                                                                         used
                                                                                                                                                                                                                                                                                                                                               Carney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               V34;
                               V34;
                                                                                                                                                         49
                                                                                                                                          46
                                                                                                                                                                                                                                                                                                 to produce which are
                                                                                                                                                                      0
                                                                                                                                                                                                                                     such
                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                             ဓ္ဌ
                                                                                                                                                                       0
```

```
RESULT 15
AAN90249
ID AAN90
XX
AC AAN90
XX
DT 24-OC
DT 25-M4
DT 01-NC
XX
DE Cucun
KW Cucun
KW Cucun
XX
OS Cucun
XX
PN WO89(
XX
PD 29-J1
XX
PF 08-DI
XX
PF 08-DI
XX
PF Quem
XX
PI Quem
XX
NPI;
                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 45
                                                                                                                                                                                                  24-OCT-2003
25-MAR-2003
01-NOV-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 199
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                   known
quash,
infect
                                                                                                                                                                                                                                                                                                                                                                                                                               mosaic
infecte
                                                        21-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New isolated cucumber mosaic virus coat protein DNA - used plants, partic. of the family Cucurbitaceae or Solanaceae, resistant to infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
                                                                                                                WO8905858-A
                                                                                                                                 Cucumber mosaic
                                                                                                                                                   Cucumber mosaic solanacea.
                                                                                                                                                                                Cucumber mosaic
                                                                                                                                                                                                                                       AAN90249;
                                                                                                                                                                                                                                                          AAN90249
                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Fig 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boeshore ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ASGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-DEC-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9621018-A1
                   Quemada H,
                                      Oran)
                                                                           08-DE
                                                                                             29-JUN-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                                                  protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber ic virus (CMV) were isolated. The CMV CP genes were isolated from sted plant tissue by PCR amplification of cDNA using primers based on CP sequences. The genes may be used for producing plants such as an cucumber, peppers and tomatoes which are resistant to CMV stion. (Updated on 16-OCT-2003 to standardise OS field)
                                                         3-1987;
                                                                           3-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ·) ASGROW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .996-333993/33
); AAR93803.
                                                                                                                                                                                                                                                                                                                                         3n 83.8%;
Similarity 97.8%;
45; Conservative
                                                                                                                                                                                                                                                                                                                           4
                                       UPJOHN
                                                                                                                                                                                                                                                                                                                                                                                  772
                                                                                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                                         CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGGCG
                                                                                                                                                                                                                                                                                                                   CCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                   Slightom JL;
                                                                                                                                                                                                 (revised)
(revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                 BP; 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mcmaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94US-00367789
                                                         87US-00135591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95WO-US007234
                                                                           88WO-US004321.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3. .659
/*tag=
                                                                                                                                  virus;
                                                                                                                                                              virus
                                                                                                                                                                                virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ල</u>
                                                                                                                                                                                                                                                                                                                                                                                  A;
                                                                                                                                                              O
                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JR,
                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                                                                                                  201
                                                                                                                                                                                                                                                           1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                              strain;
                                                                                                                                                                                coat
                                                                                                                                  strain.
                                                                                                                                                                                                                                                                                                                                                                                  Ç
                                                                                                                                                                                                                                                                                                                                             <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tricoli
                                                                                                                                                                                                                                                                                                                                            Score 44.4; DB 2;
Pred. No. 1.8e-07;
0; Mismatches 1
                                                                                                                                                                                                                                                           BP.
                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                  185
                                                                                                                                                               virus-resistant
                                                                                                                                                                                                                                                                                                                                                                                  <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DM,
                                                                                                                                                                               gene.
                                                                                                                                                                                                                                                                                                                                                                                  211 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Reynolds
                                                                                                                                                                                                                                                                                                                                                                                  0 U;
                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                             plants;
                                                                                                                                                                                                                                                                                                                                                               Length 772;
                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JF,
                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                  Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carney
                                                                                                                                                                                                                                                                                                          46
                                                                                                                                                                                                                                                                                                                           49
                                                                                                                                                               cucurbitacea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to produce which are
                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                 9
```

0;

1989-206617/28.

В ঠ Query Match 83.4%; Best Local Similarity 93.9%; Matches 46; Conservative Coat protein gene from cucumber mosaic virus C strain is inserted into a transformation vector also comprising the 35S promoter of cauliflower mosaic virus, and the polyadenylation signal of either the CaMV 35S gene or the Phaseolus vulgaris seed storage gene. This is used to transform plants of cucurbitacea and solanacea to produce virus-resistant plants. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 24-OCT-2003 to standardise OS field) Coat protein gene from C strain of cucumber mosaic virus prepare plant transformation vectors and virus-resistant Sequence Claim 1; Page 15; 370 GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG 1423 BP; 385 A; 337 19pp; English. Score 44.2; DB 1; Pred. No. 2.5e-07; 0; Mismatches 3; ů, 320 <u>ი</u> 381 T; 0 ď; Length 1423; Indels 0 Other; - used to plants. 418 49 0 Gaps 0

Search completed: December 5, 2004, 06:13:16 Job time : 227 secs

. .

0

```
Minimum
Maximum
                                                                                                                                                                                                                                                                          Title:
Perfect
Sequence
                                                                                                                 Resul'
                                                                                                                                                                                                                                           Total
                                                                                                                                                                                                                                                                 Scoring
                                                                                                                                                                                                                                                                                                      Run
                                                                                                                                                                                                  Databa
                                                                                                                                                                                                                                                    ũ
                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                               nucleic
                                                                                                                                                                                                                                                    rched
 2222111111111
43210987654321
43210987654321
                                                                                                                                                                                                                                                                                                      on:
                                                                                                                                                                                                                    pro
                                                                                                                     ct
                                                                                                                                       Pred.
score
and is
                                                                                                                                                                                                                                           dmun
                                                                                                                                                                                                                                                                           æ
                                                                                                                                                                                                  Œ
                                                                                                                                                                                                                             DB
BB
                                                                                                                                                                                                                                                                  rt
                                                                                                                                                                                                                                                                              score
                                                                                                                                                                                                                     O
O
                                                                                                                                                                                                                                                                  able
 40000
                                                                                                                  Ω
                                                                                                                                                                                                                                           Ō
                                                               นักระจะจัดเดิน
                                                                                                                                                                                                                             seq
seq
                                                                                                                                        Œ
                                                                                                                                                                                                                                           н
                                                                                                                                       No. in greates deriv
                                                                                                                                                                                                                    paing
                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                               nucleic
                   444488666664
                                                                                  8 8 4 B B B
                                                                                                                                                                                                                                           т
                                                                                                                                                                                                                              \mu\mu
                                                                                                                                                                                                                                                            Gapop 10.
                                                                                                                                                                                                                             length:
length:
                                                                                                                 Query
Match
                                                                                                                                                                                                                                           hits
                                                                                                                                                                                                                                                                               ՄՏ
53
                                                                                                                                                          44444444
                                                                                                                                                                                                                                                                                                     December
                                                                                                                                                                                                           Minimum
Maximum
Listing
 er t
                                                                                                                                                 \boldsymbol{\omega}
                                                                                                                                                                                                  M
                                                                                                                                                                                                                                                                          gatccatggacaaatctgaa
                                                                                                                                                                                                                                                                                   -09-
                                                                                                                                                                                                                                                    822
                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                           Copyright
                                                                                                                                       the nurthan ed by a
                                                                                                                                                         T: *

gb_est1: *

gb_est2: *

gb_est3: *

gb_est4: *

gb_est5: *

gb_gss1: *
  satisfying
                                                                                                                                                                                                                                                    \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                              search,
                                                                                                                                                                                                                                                    75
                                                                                                                                                                                                                                                                                    Φ
                                                                                                                                                                                                                             0
20000000000
                                                                                                                                                number
                                                                                                                                                                                                                                                                                    ψ
                                                                                                                                        n or equal
analysis c
 127
200
571
1061
1061
350
497
751
417
952
953
372
448
471
                                                                                                                 ngth
                                                                                                                                                                                                                                                                                    7-
                                                                                                                                                                                                           Match
Match
first
                                                                                                                                                                                                                                                                 .
된
                                                                                                                                                                                                                                                   seqs,
                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                    5,
                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                          Gen(
                                                                                                                                                                        * * *
                                                                                                                                                                                                                                                                                                     2004,
                                                                                                                                                                                                                                                            Gapext
                                                                                                                                                                                                                                                                                                              using
                                                                                                                                                 0
 471985966844579799956668
                                                                                                                                                                                                           0%
100%
45 gi
                                                                                                                                                 Ħ
                                                                                                                                                                                                                                                                                                                            100re
1993
                                                                                                                                                                                                                                                    82
                                                                                                                                       results of the t
                                                                                                                                                                                                                                           chosen
BM067231
H07817
AV589910
CR153168
CC140418
BX376013
CG880078
CD122050
CD121836
AZ339011
BJ232993
BI360440
BX922152
CN698549
CL708124
CO703958
CCL708124
CCG882815
CCG882815
CCC815885
BM967398
BE4331932
AQ666369
                                                                                                             : D
                                                                                                                                                                                                           summarie
                                                                                                                                                                                                                                                    .9865
                                                                                                                                                                                                                                                                                                              ₩8
                                                                                                                                                                                                                                                                                                      03
                                                                                                                                                                                                                                                             ۳
                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                Ve
                                                                                                                                                                                                                                                                                                                            ŀ
                                                                                                                                                                                                                                                                                                     :35:58
                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                              mode1
                                                                                                                                                                                                                                                                                                                            rsion
2004
                                                                                                                                                                                                                                           parameters:
                                                                                                                                       s predicted be score of the total score
                                                                                                                                                                                                                                                    Ó
                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                            3 ; Search (without a 1308.473 M
                                                                                                                                                                                                                                                    re
                                                                                                                                                                                                                                                                                                                            5.1.6
Compugen
                                                                                                                                                                                                                                                    sidue
                                                                                                                                                                                                                                                                          gtcgtaaccgtcgacgagct
                                                                                                                                           d by
                                                                                                                                                                                                                                                                                             al
Mi
                                                                                                                                       by chance to have ne result being p distribution.
                                                                                                                                                                                                                                                                                            time 1476
lignments
illion ce
                                                                                                                                                                                                                                                                                                                            Ltd
                                                                                                                                                                                                                                           65
BM067231 KS
H07817 khtj
AV589910 AV
CR153168 FC
CC140418 NI
BX376013 BX
CG880078 ZN
CD122050 ME
CD121836 ME
CD1232993 BC
BJ232993 BC
BJ232993 BC
CN698549 EC
CL708152 BX
CN698549 EC
CL703958 DC
CC1703958 DC
CC1733950 OI
CC815885 ZN
BM967398 EC
BM967398 EC
BE4331932 EC
BE4331932 EC
AQ666369 HI
                                                                                                                                                                                                                                           Ď
                                                                                                                                                                                                                                           4575
                                                                                                                                                                                                                                                                                                     476
                                                                                                                D
                                                                                                                                                                                                                                                                                             cell
                                                                                                                                                                                                                                                                                                 œ
                                                                                                                 cripti
                                                                                                                                                                                                                                           Ō
                                                                                                                                                                                                                                                                                                      Second
                                                                                                                                                                                                                                                                                             updates/sec
                                                                                                                                           ve a
printed,
                                                                                              KS08001E1
AV589910
Forward s
NDL.2417.
BX376013
ZMMBBb050
ME1-0070P
ME1-0070P
1M0070L18
BJ232993
387348 MA
BX922152
E0409C12-
OR BBa002
DG32-270k
OR BBa006
ZMMBBb049
ZMMBBc052
EST404975
EST406858
EST406858
EST398461
HS_5367_B
                                                                                                                 Ò
                                                                                                                                                                                                                                                                           ហ
                                                                                                                                                                                                                                                                                                      Œ
```

PO

ທ

Ø

Ω	a	ი	Ω	ດ		Ω	ი	ი	Ω	Ω	a	a	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω
					40															
ယ	w	Ĺ	'n	ω ·	23.4	·	Ĺ	'n	'n	'n	'n	·	'n	·	'n	'n	'n	ω •		ω ·
4	4.	4.	4.	4.	44.2	4	4.	4.	4.	4.	4	4.	4.	4	4	4	4.	4.	4	4.
J	ð	4	w	N	627	$\vdash$	μ	μ	0	Ø	J	J	$\boldsymbol{\sigma}$	S	4	Ù	N	0	0	Φ
N	Ŋ	N	N	N	æ	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
93424	44209	43531	43415	22191	BH977843	22183	11343	05101	43490	43689	46069	46200	11278	22090	46065	43628	46105	43353	43478	93361
3424	209	3531	3415	191	J	W22183	F11343	F05101	E43490	9	臣46069	E46200	F11278	W22090	E46065	E43628	E46105	E43353	E43478	W9336
Ö		ST	<b>T4</b>	ST2	Ō.	ST2	ST4	TS	ST4	<b>T4</b>	ST4	ST	ST4	ST	ST4	ST4	ST	ST4	Н	513

## ALIGNMENTS

4.4. - i li

```
RESULT 1
BM067231/c
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                            S
                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sourc
                                                                                                                                                                                            Ma
                                                                                                                                                                Ω
     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       annuum L.) and Se
Response Against
Unpublished (2001
Contact: Doil Cho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BM067231
KS08001E12
BM067231
BM067231.1
EST.
Capsicum and Capsicum and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome
Korea R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids; lamiids; Solanales; Solanaceae; Capsicum.

1 (bases 1 to 127)

1 (bases 1 to 127)

1 Lee,S., Kim,S.-Y., Chung,Y.-H., Shin,H.-J., Goh,S.-H., Pai,H.-S., Hur,C.-G. and Choi,D.

Generation of Expressed Sequence Tags from Hot Pepper (Capsicum annuum L.) and Sequence Analysis in Relation to Hypersensitive Response Against Pathogen
                                                                                                                           47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P.O. Box 115, Yusong, Taejeo:
Tel: 82-42-860-4340
Fax: 82-42-860-4309
Email: doil@mail.kribb.re.kr
High quality sequence stop:
                                                               \vdash
                                                                                                                                                             Similarity
me Research Center and National Center for Genome Info
a Research Institute of Bioscience and Biotechnology
Box 115, Yusong, Taejeon, 305-600, Republic of Korea
82-42-860-4340
82-42-860-4309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                quality sequence stop:
Location/Qualifiers
1. .127
                                                                                                                               Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       t: Doil Choi
Research Cer
                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Capsicum an
/mol_type="mRNA"
/cultivar="Hang Keun"
/db_xref="taxon:4072"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        annuum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         annuum
                                                                                                                                                                                                                                                                                          /tissue_type="anther"
/dev_stage="10 weeks after
/clone_lib="KS08"
/note="Vector: pBluescript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KS08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:22787366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (2001)
                                                                                                                             86.4%;
95.9%;
tive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Capsicum
                                                                                                                               0
                                                                                                                               Score 45.8; DB 4;
Pred. No. 3.4e-07;
); Mismatches 2
                                                                                                                             ed. No. 3.46
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127 bp
annuum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       annuum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                      germination"
                                                                                                                                                                                                                                                                                             SK (-) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                            Length 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence
                                                                                                                                    Indels
                                                                    49
      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST
                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Information
                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002
                                                                                                                                  <u>;</u>
```

വ

a

O

a

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                  RESULT 3
AV589910
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
H07817/c
                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
 JOURNAL MEDLINE PUBMED
                                                                                                                                                                                                                                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EFERENCE
AUTHORS
TITLE
JOURNAL
                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ource
                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheo Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Brassica.

1 (bases 1 to 200)

Sohn, U., Lee, C.M., Cho, K.H., Jeon, Y.H., Hahn, T.R. and Nam, H. cDNAs from Brassica napus (rape)

Unpublished (1995)

Other ESTs: Arabidopsis dbEST T44633

Contact: Uik Sohn

Laboratory of Molecular Biology

Kyungpook National University

Dept. of Genetic Eng., Kyungpook National Univ., Taegu 702-701
1 (bases 1 to 571)
Takasuga, A., Hirotsune, S., and Sugimoto, Y.
Establishment of a high the poly(A) tail-removed cDNA bovine ESTs
Nucleic Acids Res. 29 (22) 21570554
11713328
                                                                                                                                                                                                                                                                                                                     00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Laboratory of Mole
Kyungpook National
Dept. of Genetic 1
Tel: 0539505382
Fax: 0539555327
                                                                                                                    Eukaryota; Met
Mammalia; Euth
Bovinae; Bos.
                                                                                                                                                                                  AV589910 Bo
AV589910 Bo
5', mRNA se
AV589910
AV589910.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H07817
khtj009 B
H07817
H07817.1
EST.
Brassica
Brassica
                                                                                                                                                          Bos
Bos
                                                                                                                                                                                                                                                                                                                                                                      h 48. Similarity 67. 36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: usohn@bh.kyungpook.ac.
EST is putatively homologous
Seq primer: M13 forward.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                   GATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT
                                                                                                                                                         taurus
taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BNL1
                                                   hment of a high the tail-removed cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Brassica na
/mol_type="mRNA"
/cultivar="Naehan"
/db_xref="taxon:3708"
/lab_host="NM522"
/clone_lib="BNL1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   napus
                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="BNL1"
/note="Vector: pT7T3D; Site_1: NotI; Site_2: EcoRI;
/note="Vector: pT7T3D; Site_1: NotI; Site_2: EcoRI;
Poly(A)-mRNA was purified_from the leaf of B.r
cDNA library was constructed from the mRNAs by
oligo(dT) priming and directionally cloned from t
site in the vector pT7T3D (Pharmacia) to the EcoRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               napus
                                                                                                                                                                                                                                        Bos
                                                                                                                                 Eutheria;
                                                                                                                                                                                                                         sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:872639
                                                                                                                                                                                                 GI:9700903
                                                                                                                                                                                                                                       taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brassica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (rape)
                                                                                                                                                                                                                                                                                                                                                                                  . 7%;
                                                                                                                                 Chordata; Craniata; Vertebrata; Euteleostomi
Cetartiodactyla; Ruminantia; Pecora; Bovidae
                                                                                                                                                                                                                                        brain
                                                                                                                                                                                                                                                                                                                                                                     Score 25.8; I
Pred. No. 28;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   napus
                                                                 th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               200
                                                   hroughput E
libraries
                                                                                                                                                                                                                                      fetus
                                                                                           Itoh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA
                            E108
                                                                                                                                                                                                                                                  đq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    napus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to
Kr
                                                                                          স
.
                                                                                                                                                                                                                                        Вов
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsi
                            (2001)
                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                     and
                                                                                         Jitohzono, A.
                                                                                                                                                                                                                                        taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                       17;
                                                     sequencing system
| determination of
                                                                                                                                                                                                                                                                                                                                                                                               ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   equenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dbest
                                                                                                                                ia;
                                                                                                                                                                                                                                        clone
                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                          Suzuki, H.,
                                                                                                                                                                                                                                                                                                                                                                                                 00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Tracheophyta; eudicots;
                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  团
                                                                                                                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ST
                                                                                                                                                                                                                                        T 27-NOV-2001
E1BR009C12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nam, H.
                                                                                                                                                                                                                                                                                                                     148
                                                                                                                                                                                                                                                                                                                                             53
                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B.napus
                                                                                                                                                                                                                                                                                                                                                                                                                                     the NotI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Korea
                                                                                                                                                                                                                                                                                                                                                                       0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
CR153168
LOCUS
DEFINITION
                 RESULT S
CC140418
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE
    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Naest Lo
                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sourc
                                                                                                                                                                                                                                                                                                      sourc
                                                                                                                                                                   Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Č
L
                                 യഗ
                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)

Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus

1 (bases 1 to 711)

Adams,D.J., Biggs,P.J., Cox,A.V., Davies,R.M., van der Weyden,L.,

Jonkers,J., Smith,J., Plumb,R.W., Taylor,R.G., Nishijima,I., Yu,Y

Rogers,J. and Bradley,A.

Direct Submission

Submitted (20-FEB-2004) Sanger Centre, Hinxton, Cambridgeshire,

CB10 1SA, UK. http://www.sanger.ac.uk/MICER

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Animal Genetics Division
Shirakawa Institute of Animal Genetics
Odakura, Nishigo, Nishi-shirakawa, Fukushima 96
Tel: 81-248-25-5641
Fax: 81-248-25-5725
Email: kazusugi@cocoa.ocn.ne.jp
Single pass sequencing.
This clone was obtains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tch
                                                                                                                                                                   al
                                                                                                                                                                                 tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   264
                                                                                                                                                 sh 45.7%;
Similarity 71.1%;
32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CR153168
Forward strand read from insert in 5'HPF chromosome engineering clone MHPN77n06, CR153168
CR153168
CR153168.1 GI:49932013
GSS; genome survey sequence; MICER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31,
   CC140418
NDL.2417.SP6
                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46.0%;
Similarity 73.8%;
                                                                                         ATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCG 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                e pass sequencing.
clone was obtained from a
Location/Qualifiers
1. .571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Bos taurus"
/mol_type="mRNA"
/db_xref="taxon:9913"
/clone="E1BR009C12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="Bos taurus brain fetus"
/note="Vector: pZL1; Site_1: Sal1; Site_2: Not1;
was deleted from a Not1 site"
                                                                                                                                                                                                                                         organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="MHPN77n06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="brain"
/dev_stage="fetus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Bos"
mol_type="mRN!
   Notre
                                                                                                                                                                                                                              lib="MHPN"
   Dame
                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 24.4; DB 1;
Pred. No. 1.2e+02;
0; Mismatches 11;
                                                                                                                                                                 Score 24.2; DB 9;
Pred. No. 1.4e+02;
807 bp DNA
Liverpool Aedes
                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA linear GSS 06-JUL-2005'HPRT insertion targeting and 7n06, genomic survey sequence.
                                                                                                                                                    13;
 linear
aegypti ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                 Length
                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         961-8061,
  ar GSS
genomic
                                                                                           629
                                                                                                                                                                                                                                                                                                                                                 Cambridgeshire,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        571;
                                                                                                                                                                                   711;
                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Japan
   16-APR-2003
clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Poly A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>o</u>
                                                                                                                                                      0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 6
BX376013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                / Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
On May 8, 2003 ......

Contact: Genoscope

Genoscope - Centre National de Sequencage

BP 191 91006 EVRY cedex - France

Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                           Homo sapiens
Eukaryota; Metazoa; Chordata; C
Mammalia; Eutheria; Primates; C
1 (bases 1 to 1061)
Li,W.B., Gruber,C., Jessee,J. a
Full-length cDNA libraries and
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Loftus, B., Shetty, J., Knud BAC end sequencing of Aede Unpublished (2003)
Other_GSSs: NDL.2417.T7
Contact: Brendan Loftus
Department of Eukaryotic G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aedes aegypti (yellov
Aedes aegypti
Eukaryota; Metazoa; /
Neoptera; Endopterygo
Stegomyia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9712 Medical Center D:
Tel: 301-838-3543
Fax: 301-838-0208
Email: enta@tigr.org
Library was provided l
Seq primer: SP6
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99
                                                                                                                                                                                                                                                                                                                                           BX376013 Ho
BX376013 Ho
CDNA clone
BX376013
BX376013.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              th 45.7%;
Similarity 71.1%;
32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NDL.2417,
CC140418
CC140418.
GSS.
                                                                                                                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACCATGCTCACATTTGAATGACCCCATCCTGGTCGAAGCCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1
                                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="genomic DNA"
/strain="Liverpool"
/db_xref="taxon:7159"
/clone="NDL.2417"
/clone_lib="Notre Dame Liverpool"
/note="Vector: pECBAC1; Site_1: Hind III; The library
prepared from whole body tissue of newly hatched L1 laby
by David Severson at the University of Notre Dame and
Hongbin Zhang"
                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                              ed (2001)
2003 this sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Endopterygota; Diptera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Aedes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genomic
                                                                                                                                                                                                                                                                                                                                                            1061 bp mRNA
omo sapiens NEUROBLASTOMA COT
CSODCO21YM11 3-PRIMF ~~~~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to
                                                                                                                                                                                                                                                                                                                                              GI:46555591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:30009473
                                                                                                                                                                                                                                                                                                                 (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (yellow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     807)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drive,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Λq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 24.2; DB 8;
Pred. No. 1.5e+02;
0; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Knudson, l
Aedes ae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fever
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aegypti"
ic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   equenc
                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rockville,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         on,D. and aegypti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mosquito)
                                                                                                                                                                                                                                                                   Craniata; Vo Catarrhini;
                                                                                                                                                                                                                            and Polayes, D. normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Severson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
0
                                                                                                                                                                                                                           normal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hexapoda; Ins
a; Nematocera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Severson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₹
                                                                                                                                                                                                                                                                                                                                                                        sequence.
                                                                                                                                                                                                                                                                     Vertebrata;
(; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                      linear E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20850,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Insecta; Pterygota
era; Culicoidea; Ae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               807;
                                                                                                                                                                                                                                                                                  Euteleostomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                    23 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                      -APR-2004
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                    APR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      larvae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 7
CG880078/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                           Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                       sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sourc
                                                                                                  al a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 al .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The Plant Genome In University
190 Frelinghuysen 1
Tel: 732 445 3801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zea mays
Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2789.f
For more
                                                                           33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: bharti@waksman.rutgers.
Seq primer: T7
Class: BAC ends
High quality sequence start: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Bharti, A.K.
Dr.Joachim Messing's lab
The Plant Genome Initiative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bharti, A.K., Young, ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Trach
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
clade; Panicoideae; Andropogoneae; Zea.
l (bases 1 to 350)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CG880078 350 bp
ZMMBBb0504M22f ZMMBBb (HindIII)
ZMMBBb0504M22 5', genomic survey
CG880078
CG880078.1 GI:38610691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CS0DC021AG06NP1&c=2789.f Location/Qualifiers
1. .1061
2 ATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zohovetz, V., Fuks,
Sequencing of the
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45.3%;
ilarity 68.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    45.7%;
ilarity 61.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       732 445
732 445
                                                                                                                                                                                                                                                                                                 /organism="Zea mays"
/mol_type="genomic DN/
/cultivar="B73"
/db_xref="taxon:4577"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   primer. Findigested was sites of the sites o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo |
/mol_type="mRNA"
/db_xref="taxon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CS0DC021YM11"
/tissue_type="NEUROBLASTOMA COT 25-NORMALIZED"
/clone_lib="Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED"
/clone_lib="Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                   Ly sequence start Location/Qualifier
                                                                                                                                                                                                         /clone_,
                                                                                                                                                                                                                       db_xref="taxon:4577"
/clone="ZMMBBb0504M22"
/lab_host="B. coli DH108"
/clone_lib="ZMMBBb (HindIII)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Young, S., Kave,
                                                                                                                                                                                                     Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         maize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Road,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U
                                                                                                  Score 24;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
Pred.
5; Mis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kavchok,S., Keizer,G., Bronz
/u,Y., Wing,R. and Messing,J.
genome at PGIR (2003c)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Piscataway,
                                                                                                                                                                                                   pcugi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       e 24.2; DB 5;
. No. 1.5e+02;
iamatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                      DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    edu
                                                                                                                                                                                                  Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rutgers,
                                                                                              DB 9; 1
1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z
                                                                                                                                                                                                     HindIII;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08854,
                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Waksman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
genomic c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bronzino,
                                                                                                                            350;
                                                                                                                                                                                                       Site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tracheophyt
                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
0
                                                                                                                                                                                                       ..
N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-DEC-2003
                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rutgers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PACCAD
                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
0
```

P.L.,

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
CD122050
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                      RESULT (CD12183)
                                                                                                                                                                                                              日
                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                              Query Naest Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bourc
                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                              σω
                                                                                                                                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae; Schistosoma.

1 (bases 1 to 465)

1 (bases 1 to 465)

Verjovski-Almeida,S., DeMarco,R., Martins,E.A.L., Guimaraes,P.E.
Ojopi,E.P.B., Paquola,A.C.M., Piazza,J.P., Nishiyama,M.Y. Jr.,
Kitajima,J.P., Adamson,R.E., Ashton,P.D., Bonaldo,M.F.,
Coulson,P.S., Dillon,G.P., Farias,L.P., Gregorio,S.P., Ho,P.L.,
Leite,R.A., Malaquias,L.C.C., Marques,R.C.P., Miyasato,P.A.,
Nascimento,A.L.T.O., Ohlweiler,F.P., Reis,E.M., Ribeiro,M.A.,
Sa,R.G., Stukart,G.C., Soares,M.B., Gargioni,C., Kawano,T.,
Rodrigues,V., Madeira,A.M.B.N., Wilson,R.A., Menck,C.F.M.,
Setubal,J.C., Leite,L.C.C. and Dias-Neto,E.
Transcriptome analysis of the acoelomate human parasite Schiston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mansoni
Nat. Genet. 35 (2), 148-157 (2003)
22879926
12973350
Contact: Dr. Sergio Verjovski-Almeida
Departamento de Bioquimica
Instituto de Quimica - Universidade de
Av. Prof. Lineu Prestes 748 sala 1200,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CD122050
ME1-0070P-V208-H01-U.B N
ME1-0070P-V208-H01.B, mF
CD122050
CD122050.1 GI:34660102
EST.
Schistosoma mansoni
Schistosoma mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: +55-11-3091-2173
Fax: +55-11-3091-2186
Email: verjo@iq.usp.br
This sequence was deriv
Genome Project. All segments
                                                                                                                                                                                                              67
  CD121836
ME1-0070P-V169
ME1-0070P-V169
CD121836
CD121836.1 GI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 annotated.
in the fol
Plate: ME1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Av. Pro
Brasil
                                                                                                                                                                                                                                                                                                E
E
                                                                                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                              Similarity
3; Conserva
                                                                                                                                                                                                        ACCTATGTATAAATTTGTTTGAACCATAAATGGACATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCAAATGACAAATTTGAATTAACCGTTTCTTTTTCTCATCGTCGTCG
                                                                                                                                                                                                                                                     ATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Project. All sequences in the project were assembled and this entry and all the assembled sequences can be following URL http://bioinfo.iq.usp.br/schisto/ME1-0070P-V208 row: 1 column: H.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/db_xref="taxon:6183"
/clone="ME1-0070p-V208-H01.E
/sex="mixed pool"
/dev_stage="egg"
/lab_host="Mus musculus"
/clone_lib="ME1-0070"
/note="Vector: pGEM T-easy"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Schistosoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:34660102
                        GI:3465
                                                                   9 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465
                                                                                                                                                                                                                                                                                             45.3%;
68.8%;
ive
                                                               -C07-U.В
                        9890
                                                   B ME1-0070
mRNA secur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        465 bp
B ME1-0070
mRNA sear
                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nıca
Universidade de
~ 748 sala 1200,
                                                                                                                                                                                                                                                                                              Mismate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence
                                                                                                                                                                                                                                                                                                                24;
No.
                                                                                                                                                                                                                                                                                                                                                                                                   T-easy"
                                                               quenc
                                                                                                                                                                                                                                                                          DB
1.6/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA 1
Schistosoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mansoni"
                                                                                  Schistosoma
                                                                                                                                                                                                                                                                                         )B 6; __
.6e+02;
___15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>ש</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sao Paul
05508-90
                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
mansoni
                                                                                   mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                         465;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Guimaraes, P.
                                                                                                                                                                                                              314
                                                                                                                                                                                                                                                      49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  290
                                                                                     EST 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST 14-SEP-2003
CDNA clone
                                                                                                                                                                                                                                                                                           o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         t;
stosoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schistosoma
                                                                                                                                                                                                                                                                                           Gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P.L.
                                                                                                          SEP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              口
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
.
                                                                                                                                                                                                                                                                                            <u>0</u>
                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                         RESULT 10
AZ339011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bourd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Dr. Sergio Verjovski-Almeida
Contact: Dr. Sergio Verjovski-Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schistosoma mansoni
Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea;
Strigeidida; Schistosomatoidea; Schistosomatidae; Schistosoma.

E 1 (bases 1 to 497)
E 1 (bases 1 to 497)
S Verjovski-Almeida,S., DeMarco,R., Martins,E.A.L., Guimaraes,P.E.N
Coulson,P.S., Dillon,G.P., Farias,L.P., Gregorio,S.P., Ho,P.L.,
Leite,R.A., Malaquias,L.C.C., Marques,R.C.P., Miyasato,P.A.,
Nascimento,A.L.T.O., Ohlweiler,F.P., Reis,E.M., Ribeiro,M.A.,
Sa,R.G., Stukart,G.C., Soares,M.B., Gargioni,C., Kawano,T.,
Rodrigues,V., Madeira,A.M.B.N., Wilson,R.A., Menck,C.F.M.,
Setubal,J.C., Leite,L.C.C. and Dias-Neto,E.
Transcriptome analysis of the acoelomate human parasite Schistosomanceni
                                                                                                                                                                                                                                                                                                                                                                                                                                               267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tch
Mouse whe plasmid
              Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duva Islam, H., Longacre, S., Mahmoud, M., Meenen, E., E Reilly, M., Rose, M., Rose, R., Stokes, R., Tingey, Niederhausern, A. and Wright, D., Weiss, R. Mouse whole genome scaffolding with paired end
                                                                                                                       Eukaryota; Metazoa; Mammalia; Eutheria; 1 (bases 1 to 751)
                                                                                                                                                                                                            GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33;
                                                                                                                                                                                                                                                  AZ339011 751 k
1M0070L18F Mouse 10kb plasmid
clone UUGC1M0070L18 F, genomic
AZ339011
AZ339011.1 GI:10412854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nat
                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22879926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 45.3%;
Similarity 68.8%;
33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genet.
     whole genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:6183"
/clone="ME1-0070P-V169-C07.B'
/sex="mixed pool"
/dev_stage="egg"
/lab_host="Mus musculus"
/clone_lib="ME1-0070"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35 (2),
                                                                                                                                                                                                             (house mouse)
                                                                                                                                                Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              148-157 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 24; DB 6; Pred. No. 1.6e+02; Mismatches 15
                                                                                                                                                                                                                                                                                                genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pGEM T-easy"
                                                                                                                                                                                                                                                                                             bp DNA linear
d UUGC1M library Mus
ic survey sequence.
                                                                                                                                                Craniata; Vertebrata; Sciurognathi; Muridae;
                                                             Beacorn, T., Duval, B., Hamil
M., Meenen, E., Pedersen, T.,
okes, R., Tingey, A., von
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 497;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                        reads
                                                                                                                                                                                                                                                                                                                    musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Guimaraes, P.E
ma, M.Y. Jr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49
                                                                                                                                                                                                                                                                                                                                                                                                                                               314
                                                                                                                                                 Euteleostomi; Murinae; Mu
                                                                                                                                                                                                                                                                                                                                         GSS
                                                                                                          Hamil, C.,
                         from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schietosoma
                                                                                                                                                                                                                                                                                                                                        29-SEP-
```

Gap

0;

genomic

Mus

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
BJ232993/c
LOCUS
                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local s
Matches 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
Triticum aestivum

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.

E 1 (bases 1 to 417)
S Ogihara, Y. and Murai, K.
Expressed genes in Triticum aestivum
Unpublished (2002)
Contact: Tadasu Shin-i
Center For General
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0
Plate: 0070 row: L column: 18
Seq primer: CGTTGTAAAACGACGGCCAGT
Class: plasmid ends
High quality sequence stop: 751.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert B. Would Contact: Robert B. Would Contact: Robert B. Would Contact B. Would
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50
                                                                                                                                                                                                                                                                                                                       BJ232993 Y.
BJ232993 Y.
aestivum cI
BJ232993
BJ232993.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rm. 308
84112,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fax:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 45.3%; Similarity 75.0%; 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATAGACTAATCTGAATGAAGCAGAACTTGCCATCACCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      801 585
801 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (http://www.jax.org/resources/documents/dnares/). The DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end-repaired with T4 DNA polymerase and T4 polynucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a der of pWD42 (gi | 4732114 | gb | AF129072.1), a copy-number inducible derivative of plasmid R1. The vector was with adaptors complementary to the insert adaptors purified. The sheared, adaptored mouse DNA was anneadaptored vector DNA, and transformed into chemically-competent E. coli XL10-Gold (Stratagene) and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="Male"
/lab_host="E. Coli strain XL10-Gold, T1-resistant,
/clone_lib="Mouse 10kb plasmid UUGCIM library"
/note="Vector: PWD42nv; Purified genomic DNA from Imusculus C57BL/6J (male) was obtained from the Japanese DNA Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'mol_type="genomic
'strain="C57BL/6J"
'db_xref="taxon:100"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="UUGC1M0070L18"
                                                                                                                                                                                                                                                                                                                                                                                                               Ogihara
NA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5606
7177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Weiss
                                                                                                                                                                                                                                                                                                                                                                                                              417 bp
unpublished
whe2o05 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polymers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 24; DB 8;
Pred. No. 1.8e+02;
); Mismatches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Research Bldg.,
                                                                                                                                                                                                                                                                                                                                                                                                               cDNA
mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               00
                                                                                                                                                                                                                                                                                                                                                                                                              library, sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
cy, Wh_e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  751;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Stratagene)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 05-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              annealed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           derivative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SLC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ligated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H-"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
BI360440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                  COMMENT
                               ORIGIN
                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                         JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                           sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ma
                                                                                                                                                                                                          PO Box 166, Clay Center, NE 68933-Tel: 402 762 4366
Fax: 402 762 4390
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases call
v0.980904.e. Vector identified by
and -minmatch 12 options.
PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tch
                                                                                                                                                                                                                                                                                                 1 (bases 1 to 573)
Fahrenkrug, S.C., Smith, T.P.
Vallet, J., Wise, T., Rohrer,
Quackenbush, J. and Keele, J.
Porcine gene discovery by n
EST cluster assembly
Mamm. Genome 13 (8), 475-47
22213789
12226715
Contact: Smith TPL
USDA, ARS, US Meat Animal R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94
                                                                                                                                                                                                                                                                                                                                                                                                                           BI360440
387348 MARC
BI360440.1
BI360440.1
EST.
Sus scrofa
Sus scrofa
Eukaryota;
Mammalia; E
                                                                                                                                                              BACKWARD: GT
Plate: 138
Seq primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              National
1111 Yata
Tel: 81-5
Fax: 81-5
Email: ts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                 FORWARD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                            ikaryota; Metazoa; Chordata; Cran
ammalia; Eutheria; Cetartiodactyl
(bases 1 to 573)
ahrenkrug, S.C., Smith, T.P.L., Fre
allet, J., Wise, T., Rohrer, G.A., F
uackenbush, J. and Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCAGTTGAAACATCTGNCTGAACCTGAGCTGGTGCTCCTCGCCGGCGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 Yata, M...
: 81-559-81-6856
: 81-559-81-6855
il: tshini@genes.nig.ac.jp.
Location/Qualifiers
417
--"Triticum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44.9%; ilarity 65.4%; Conservative
                                                                                                                                                                                                                                                                 ARS, US Mea

>x 166, Clay of

402 762 4366

402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MARC
AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/cultivar="Chinese S
/db_xref="taxon:4565
/clone="whe2o05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Institute
                                                                                                                                                  8 row: A column: 5 r: ATTTAGGTGACACTATAG Location/Qualifiers
                                         endometrium,
                                                    Library made
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_i
                                                                                                                   organism="Sus/mol_type="mRNJ
                                                                                                                                                                                   GTTTTCCCAGTCACGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'tissue_type="seed DPA10"
'dev_stage="Feekes' scale
'clone_lib="Y. Ogihara un
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Triticum
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (pig)
                                                                           ">1_type="mRNA"

>1_type="mRNA"

>_xref="taxon:9823"

.ssue_type="pooled"

.b_host="DH10B"

one lib_""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2PIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:15056468
                                                                                                                                                                                                                                                                                          Center, N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of Genetics
Shizuoka 411-
                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata; Craniata; Ver
Cetartiodactyla; Suina;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          573
scrofa c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
                                                                                                                                                                                                                                                                                                                                                   -478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ore 23.8; DB 4;
ed. No. 1.9e+02;
Mismatches 18;
                                                                                                                                                                                                                                                                                          1 Research
NE 68933-0
                                                                                                                                                                                                                                                                                                                                                                        normalized cDNA-library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Spring"
55"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          scale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aestivum"
                                                                                                                                                                                                                                                                                                                                                   (2002)
                                                                                                                                                                                                                                 called and alt_trimmed by cross_match with t
                                                                                                                                                                                                                                                                                                                                                                                            Freking, B.A., Pertea, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ale 11.2"
unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ហុ
                                                                                                                                                                                                                                                                                          n Center
-0166, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Japan
                                                                                                                                                                                                                                                                                                                                                                                                                              Vertebrata;
na; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                             , Cho,J., Wh
Sultana,R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA
                                                              Not1;
                                                    testis,
                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                library,
                                                                                                                                                                                                                                                                                                                                                                        sequencing
                                                              Site
                                         placent
                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi
Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       团
                                                                                                                                                                                                                                               with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ST
                                          ovary,
                                                                                                                                                                                                                                                                                                                                                                                                         White
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
•
                                                                                                                                                                                                                                   -minscore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ហ
                                                              Ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-AUG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wh.
                                                               SalI;
                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>
```

HANDER TO A

alemanijan ta ji gradaji

```
RESULT :
BX92215;
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
DEFINITION
DEFINITION
                         RESULT 14
CN698549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                멍
                                                                                                       श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                  cedex, FRANCE
Tel: 33 (0) 5.61.28.51.14
Fax: 33 (0) 5.61.28.53.08
Email: tosser@toulouse.inra.fr
Clone distribution: AGENAE Resource centre
Francois.Piumi@jouy.inra.fr, INRA, CEA Rac
genome (LREG), Domaine de Vilvert, 78352,
FRANCE, +33 (0) 1.34.65.28.02, +33 (0) 1.3
Sequence cleaned of vector, adaptator and
at sigenasupport@jouy.inra.fr to obtain t)
                                                                                74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BX922152 Sus

BX922152 Sus

scan0022d.e.

BX922152

BX922152.1

EST.

Sus scrofa (

Sus scrofa
CN698549
E0409C12-9
                                                                                                                                                                                                                                                                                                                                                                                                                  sequence.
Plate: 002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34;
                                                                                                                                 Similarity
34; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bonnet, A., Tosser-Klopp, G., Benne, F., Caba
Soares, M., Bonaldo, F. and Hatey, F.
A Pig Normalised Multi-Tissue cDNA Library
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ñ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 w
                                                                                                        w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genetique Animale
Institut National de la
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Tosser-Klopp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 609)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chemin de Borde-Rouge cedex, FRANCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 4; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCATTCAGAAAAGAGAAGCAGCCAGTGGTGGCTGAGACAGTAGAAGAGGT
                                                                                                       TCCATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rccaregacaaarcrgaarcaaccagrecreerceraacceregaceaecr
                                                                               CATTCAGAAAAGAGAAGCAGCCAGTGGTGGCTGAGACAGTAGAAGAGGT
                                                                                                                                                                                              /organism="Sus scrofa"
/mol_type="mRNA"
/db_xref="taxon:9823"
/clone="scan0022d.e.22"
/tissue_type="mixed"
/dev_stage="from embryos to adults"
/clone_lib="Sus Scrofa library (scan)"
/clone_lib="Sus Scrofa library (scan)"
/note="tissues: adipose tissue, brain, kidney, live
muscle, ovary, testis, heart, hypothalamus, pancre
skin, spleen, thymus, placenta, pituitary gland, sesicle, small intestine, uterus, adrenals, bulbo
gland, cerebral trunk, epididymis, female gonad,
gall-bladder, hippocampus, large intestine, male gmelanocytes, stomach, udder"
                                                                                                                                                                                                   gland, cerebral gall-bladder, l melanocytes, st
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sus
 ហ
                                                                                                                                                                                                                                                                                                                                                                                                    22 row: e column:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Metazoa;
 NIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (pig)
                                                                                                                                                                                                                                                                                                                                                                                        .609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:41139000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scrofa library
2 5prim, mRNA (
                                                                                                                                 44.9%;
66.7%;
ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44.9%;
66.7%;
ive
Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Crania
Cetartiodactyla;
                                                                                                                                0
 E11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                 Score 23.8; DB
Pred. No. 2e+02;
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Recherche
Auzeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ed. No. 2e+02;
Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       609
 \omega
31 bp
whole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (scan)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       đq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Ver
actyla; Suina;
mRNA
embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                          ce centre. Francois PIUMI, CEA Radiobiologie et EU, 78352, Jouy-en-Josas co
3 (0) 1.34.65.22.73
ator and repetitions. Corobtain the chromatogram (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Agronomique
BP27, 31326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17;
                                                                                                                                  17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cabau,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
scrofa cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vertebrata;
linear | cDNA library
                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Castanet-Tolosan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Villeger,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ហ
                                                                                                                                                            609;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST :
                                                                                                                                                                                                                                        18, pancreas,
  gland, semi
5, bulbo ure
              ES
ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIUMI,
et Etude
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                         53
 (Long)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          102
                                                                                                                                                                                                                male
               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact u
              18-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cedex,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-JAN-2004
                                                                                                                                                                                                                                                                                 liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gарв
                                                                                                                                 Gaps
                                                                                                                                                                                                                                                       seminal
                                                                                                                                                                                                                gonad
                                                                                                                                                                                                                                           uretral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E 1 (bases 1 to 631)

S Sharov, A.A., Piao, Y., Matoba, R., Dudekula, D.B., Qian, Y.,

VanBuren, V., Falco, G., Martin, P.R., Stagg, C.A., Bassey, U.C.,

Wang, Y., Carter, M.G., Hamatani, T., Aiba, K., Akutsu, H., Sharova, L.,

Tanaka, T.S., Kimber, W.L., Yoshikawa, T., Jaradat, S.A., Pantano, S.,

Nagaraja, R., Boheler, K.R., Taub, D., Hodes, R.J., Longo, D.L.,

Schlessinger, D., Keller, J., Klotz, E., Kelsoe, G., Umezawa, A.,

Vescovi, A.L., Rossant, J., Kunath, T., Hogan, B.L., Curci, A.,

D'Urso, M., Kelso, J., Hide, W. and Ko, M.S.

Transcriptome analysis of mouse stem cells and early embryos

PLoS Biol. 1 (3), 410-419 (2003)

Contact: Dawood B. Dudekula

Laboratory of Genetics

National Institute on Aging/National Institutes of Health

333 Cassell Drive, Suite 4000, Baltimore, MD 21224-6820, USA

Email: cdna@lgsun.grc.nia.nih.gov

Plate: E0409 row: C column: 12
                 tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seq primer: High quality POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  quality sequence
                                                                         cDNA clone NIA:E0409C12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="NIA:E0409C12 IMAGE:30869411"
/tissue_type="whole embryo including extraembryonic
tissues at 11.5-days postcoitum"
/dev_stage="E11.5"
/lab_host="DH10B"
/clone_lib="NIA Mouse E11.5 whole embryo cDNA library
(Long)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'db_xref="niaEST:E0409C12-5"
'db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 row: C co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:47467298
44.5%;
69.6%;
tive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Rodentia;
Score 23.6; DB 7;
Pred. No. 2.4e+02;
D; Mismatches 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; I Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IMAGE: 30869411
                               Length 631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qian, r.,
Bassey, U.C.,
H., Sharova, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ب
س
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA sequence.
```

7 TGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGACGAGC

Similarity 12; Conservat

Indels

**0** 

Gaps

0,

밁

TGGACAAAGGTGAAGCACACCGTGCTGCACCTTAACCCCTCACCTGGC

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
CL708124
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                       8
 Search completed:
Job time : 1480 s
                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                    Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CL708124
(ON OR_BBa0028C18.r OR_BBa Oryza rufipogon genomic clone OR_BBa0028C18
3', genomic survey sequence.

MC1708124.1 GI:50595162

GSS.
Oryza rufipogon
(SM Viridiplantae; Stophyta; Embryophyta; Tracheophyta;
(Spermatophyta; Embryophyta; Tracheophyta;
(Spermatophyta; Embryophyta; Tracheophyta;
(SM Oryza rufipogon
(SM Viridiplantae; Stophyta; Embryophyta;
(SM Oryza rufipogon
(SM Viridiplantae; Stophyta; Liliopsida; Poales; Poaceae;
(SM Viridiplantae; Poaceae; Stophyta; Liliopsida; Poaceae;
(SM Viridiplantae; Stophy
                                                                                                                                                                                                                                                           Match
                                                                                                   459
                                                                                                                                                      10
                                                                                                                                                                                                    h 44.5%;
Similarity 76.3%;
29; Conservative
                                                                                                  l: December
secs
                                                                                                                                                                                                                                                                                                                            /organism="Oryza rufipogon"
/mol_type="genomic DNA"
/db_xref="taxon:4529"
/clone="OR_BBa0028C18"
/tissue_type="young leaves"
/lab_host="DH10B-T1 phage ref/clone_lib="OR_BBa"
/note="Vector: pAGIBAC1; Site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
1. .666
                        5
                        2004,
                                                                                                                                                                                                    Score 23.6; D
Pred. No. 2.5e
0; Mismatches
                        06:38:00
                                                                                                                                                                                                    DB 9;
.5e+02;
es 9;
                                                                                                                                                                                                                                                                                                                                       Site
                                                                                                                                                                                                                                                                                                                                                                                       resistant
                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                       יי
                                                                                                      496
                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                       HindIII;
                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                           \boldsymbol{\omega}
                                                                                                                                                                                                                                                           66;
                                                                                                                                                                                                                                                                                                                                       Site
                                                                                                                                                                                                        ,.
0
                                                                                                                                                                                                                                                                                                                                       26-JUL-2004
_BBa0028C18
                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                        HindIII"
                                                                                                                                                                                                        <u>.</u>
```

This Page Blank (uspto)

Run

Ŝ

옻

```
Title:
Perfect s
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Command line parameters:
-MODEL=frame+_p2n.model -DEV=xlh
-Q=/cgn2_1/USPTO_spool/US09857841/runat_03122004_160551_18585/app_query.fasta-DB=GenEmbl -QFMT=fastap -SUFFIX=p2n.rge -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US09857841_@CGN_1_1_3731_@runat_03122004_160551_18585 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=0
-FGAPEXT=7 -YGAPPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                           Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              earched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              et-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          processing:
     4001
                                                                                                            C
                                                                                                                                                                                     Pred. No. is the nuscore greater than and is derived by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG
BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           table:
                                                                                             ŝ
                                                                                             cor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq
seq
   69 69 69 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic
                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length:
                                                                                                                                                                                                                                                         GenEmbl:*

1: gb ba:
2: gb htg
3: gb on:
4: gb on:
5: gb pat
7: gb ph
8: gb pl:
9: gb pl:
11: gb st
11: gb un
14: gb un
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Xgapop 1
Ygapop 1
Fgapop
Delop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-8
69
1 MDKSI
 100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hits
                                                                                           Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         December
                                                                                                                                                                                                                                                      gb ba:

gb htg:

gb ov:

gb ov:

gb ov:

gb ov:

gb ov:

gb vi:

*

gb vi:

*

gb vi:

*

gb vi:

*

gb ov:

g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 857-
                                                                                                                                                                                      number of r
an or equal
y analysis o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
20000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.
                                                                                         ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match
Match
first
    53
130
130
130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ភ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neing
                                                                                               Q
                                                                                                                                                                                                                        of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
    \sigma \sigma \sigma \sigma
                                                                                             \square
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0៖
100៖
45 នា
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644849
                                                                                                                                                                                        1 to
BD261798
AR031575
AR065687
AR097446
                                                                                                                                                                                     results predicted by chance to have to the score of the result being of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14
                                                                                            IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                     SUMMARIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : 16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          plus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Search time 2543 (without alignments 260.344 Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ltd
BD261798
AR031575
AR065687
AR097446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cell
                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update
                                                                                                                                                                                                                         have
                                                                                                                                                                                                    ve a
printed,
Enhanceme
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
```

5 69 100.	# 69 TOO.	20 100	3 69 100	2 69 100.	T 69 100.	000.	0 69 100	9 69 100.	8 69 100.	7 69 100.	6 69 100.	5 69 100.	4 69 100.	3 69 100.	2 69 100.	1 69 100.	0 69 100.	9 69 100.	8 69 100.	7 69 100.	6 69 100.	25 69 100.0	4 69 100.	3 69 100.	2 69 100.	1 69 100.	0 69 100.	9 69 100.	8 69 100.	7 69 100.	6 69 100.	5 69 100.	4 69 100.	3 69 100.	2 69 100.	1 69 100.	0 69 100.	69 100.	69 100.	69 100.	69 100.	69 100.	
S	U	П (	Л	S	U	10	ות	S	υı	ហ	v	S	Ŋ	S	ហ	S	ហ	S	S	ហ	ហ	154	ហ	ഗ	S	ý	S	ÇT I	ហ	ÇT I	ហ្វា	UT (	J	ហ	S	ហ	ហ	Ü	w	W	U	Ü	
																		14			თ	თ	თ	თ	ത	თ	თ	ത -	თ -	თ -	თ (	თ (	σ	თ	თ	ω	თ	σ	თ	σ	თ	თ	
52334	F06554	はいいいん	F52334	F52334	F52334		下につコスム	F52334	F52334	F52334	2334	F52333	F36819	F35045	F31636	F28186	F19862	10	B07062	F44425	0176	149963	49962	974	09744	6568	06568	03157	3157	996	9959	097	09744	06568	06568	3157	3157	9961	9744	65	3157	996	
AF523349 Cucumber	01000	07779 (	7	AF523346 Cucumber	2334		523344	AF523343 Cucumber	AF523342 Cucumber	AF523341 Cucumber	AF523340 Cucumber	AF523339 Cucumber	AF368192 Cucumber	AF350450 Cucumber	AF316362 Cucumber	AF281864 Cucumber	9862	09	AB070622 Cucumber	2 B	0 DNA encodi	3 Sequence	62 Se	97445 Sequenc	7444	5686 Sequenc	5685	1574 Sequenc	1573 Šeguenc	60 Sequence	59 Se	7442	7441	5683	5682	AR031571 Sequence	AR031570 Sequence	149961 Sequence 11	AR097443 Sequence	AR065684 Sequence	AR031572 Sequence	I49964 Sequence 14	

## ALIGNMENTS

	COMMENT	JOURNAL	TITLE	AUTHORS	REFERENCE		ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION		DEFINITION	Locus	BD261798	RESULT 1
PN JP 2002532098-A/2  PD 02-OCT-2002  PF 11-DEC-1998 JP 2000588378  PI RONG XIANG FANG, JUNG LIN WU, XIAO YING CHEN  PC C12N15/09, A01H5/00, C07K14/415, C07K19/00, C12N5/10, C12N15/00, PC  PC C12N5/00  CC Enhancement in protein production by higher plants using CC  ubiquitin or  CC cucumber mosaic virus coating protein peptide FH Key	STI	or cucumber mosaic virus coating protein peptide Patent: JP 2002532098-A 2 02-OCT-2002;	production by high	ang,R.X., Wu,J.L. and Chen,X.Y.	Cucumovirus.  1 (bases 1 to 53)	Viruses; ssRNA positive-strand viruses, no DNA stage; Bromoviridae;		Cucumber mosaic virus (cucumber mosaic cucumovirus)		BD261798.1 GI:33071566 im N		or cucumber mosaic virus coating protein peptide.		DNA linear		

```
Percent Similarity:
Best Local Similarit
Query Match:
DB:
                                                                                                                                                                          Score:
Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
              REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                  DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                    SOURCE
ORGANISM
                                                                                                                                                                                                               Alignment
Pred. No.:
                                                                                                       RESULT 3
AR065687
                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
AR031575
                                                                                                                               밁
                                                                                                                                             ફ
                                                                                                                                                                                                                                                                                                                                                                                                        $
                                                                                                                                                            -60-sn
                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                 rocus
                                                                                                                                                                                                                                                                                                                                                             Locus
                                                                                                                                                                                                                                                                                                                                                                            RE
                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
        EATURE
                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                  ent Similarity:
Local Similarity
Y Match:
воитсе
                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.
                                                                                                                                                                                                                                                                                                                                                                                                                         857-841
                                                                                                                                                            ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ö
                                                                                                                                                            7-841
                                                                                                                                                                                                                       Scores
                                                                                                                                                                                                                                                               Unclassified.

1 (bases 1 to 130)

1 (bases 1 to 130)

Haseloff, J., Brand, A., Perrimon, N. and Cell ablation using trans-splicing repatent: US 5866384-A 14 02-FEB-1999;

Location/Qualifiers
Unclassified.

1 (bases 1 to 130)

Haseloff, J., Brand, A., Perrimon, N. and Cell ablation using trans-splicing repatent: US 5849548-A 14 15-DEC-1998;

Location/Qualifiers

1. .130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                     AR031575
Sequence
AR031575
AR031575.
                                                  Unknown.
Unknown.
                                                                         AR065687
Sequence
AR065687
AR065687.
                                                                                                                               W
                                                                                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                           O)
                                                                                                                                                                                                                                                                                                                                                                                                         \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 円円
                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ö
                                                                                                                                                            1-
                                                                                                                                                                                                                                                                                                                                                                                                                        1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifie CDS
                                                                                                                                                                                        .ty:
                                                                                                                                                            14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                         \vdash
                                                                                                                                                                                                                                                                                                                                     ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Cucumber most/mol_type="genomic DNA"/db_xref="taxon:12305"
                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Locat
                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                        1. ....
/organism="unknown"
/mol_type="unassign
                                                                                                                                                            ×
                                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                          0.00137
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                       0.000526
69.00
100.00%
100.00%
100.00%
                                                                                         from
                                                                                                                                                                                                                                                                                                                                       GI:5
                                                                          GI:5995903
                                                                                                                                                                                                                                                             .130
                                                                                                                                                                                                                                                                                                                                                      m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
53
                                                                                                                                                                                                                                                                                                                                                      rom
                                                                                                                                                            AR0315
                                                                                                                                                                                                                                                                                                                                                                                                                        BD261798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ion,
                                                                                                                                                                                                                                                                                                                                        945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lifiers
(6). .(
n/Qualifiers
                                                                                        patent
                                                                                                                                                                                                                                                                                                                                                    patent
                                                                                                                                                            75
                                                                                                                                                                                                                                                                                                                                       864
                                                                                                                                                            1-
                                                                                                                                                                                                                                                                                                                                                                                                                        (1-53)
                                                                                        us
US
                                                                                                                                                                                                                                                                                                                                                      130
US 50
                                                                                                                                                                                                                                             signed
                                                                                                                                                            130)
                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                         U O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (47)
8
                                                                                        ) bp
5849548
                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mosai
)NA"
                                                                                                                                                                                                                                                                                                                                                      96638
96638
                                                                                                                                                                                                                                              DNA"
              and Goodmaribozymes
               œ
                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O
                                                                                                                                                                                                                                                                                  and Goodr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ±ve
                              Goodman,
                                                                                                                                                                                                                                                                                          Goodman,
                                                                                                                                                                           140000
440000
                                                                                                                                                                                                                                                                                                                                                                                                                                        000043
                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                            .inear
                                                                                                 inear
                                                                                                                                                                                                                0
                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                                                           47
                                                                                                                               94
                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                 PAT
                                                                                                                                                                                                                                                                                                                                                             PAT
                                                                                                                                                                                                                                                                                                                                                             29
                                                                                                 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                             SEP-
                                                                                                                                                                                                                                                                                                                                                             1999
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                RESULT 5
I49964
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Si
Best Local
Query Mato
                                                                                                                                                                                                                                                                            Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
AR097446
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Pred. No.: Score:
                                                                                                                                                                                                   5
                                                                                                                                                                                                                                    Query
DB:
               ORIGIN
                                                                                                           SOURCE
                                                                                                                                                                                    명
                                                                                                                                                                                                                    us-
                                                                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SD
Alignment
                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
80
                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                            Percent
                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                       ORGANIS
                                                                                                                                                                                                                    -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ent Similarity:
Local Similarity:
/ Match:
                                                                                                                                                                                                                                                    Local
                                         Bourc
                                                                                                                                                                                                                                                                                                                              Bourc
                                                                                                                                                                                                                                             Matcl
                                                                                                                                                                                                                    85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85
                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                   Similarity:
cal Similarity:
                                                                                                                                                                                                                                                                                                      M Unknown.
Unclassified.
1 (bases 1 to 130)
1 (bases 1 to 130)
Haseloff, J., Brand, A., Perrimon, N. and Goodman
Cell ablation using trans-splicing ribozymes
Patent: US 6071730-A 14 06-JUN-2000;
Location/Qualifiers
1. .130
---nism="unknown"
                                                                                                                                                                                                                                                                              ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
                                                                                                                                                                                                                                                                                      Scores:
Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores:
                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                             AR097446
Sequence 14
AR097446
AR097446.1
                                                                                                 Unknown.
Unknown.
                                                                                                                         149964
Sequence
149964
149964.1
                                      Unclassified.

(bases 1 to 130)

Haseloff,J., Brand,A., Perrimon,N. and Goodman,H.M.

Cell ablation using trans-splicing ribozymes

Patent: US 5641673-A 14 24-JUN-1997;

Location/Qualifiers

1. .130
                                                                                                                                                                                                   1
                                                                                                                                                                                    w
                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \vdash
                                                                                                                                                                                                                    -4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
Ö
                                                                                                                                                                                                                   (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-14)
                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                14
                        /mol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="unknown"
/mol_type="unassigned
                          organism="unknown"
                                                                                                                           GI:
                                                                                                                                                                                                                   ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                   0.00137
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.00137
69.00
100.00%
100.00%
100.00%
                                                                                                                                          from
                                                                                                                                                                                                                                                                                                                                                                                                                                from
                                                                                                                                                                                                                                                                                                                                                                                                               GI:12806176
                                                                                                                                                                                                                    AR097446
                     _type="unassigned
                                                                                                                           2472184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR065687
                                                                                                                                                                                                                                                                                                                                                                                                                              patent
                                                                                                                                          patent
                                                                                                                                                                                                                    (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-130)
                                                                                                                                          US
E1
                                                                                                                                                                                                                                                                                                                                                                                                                               130 bp
US 6071730
                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                          30 bp
5641673
                                                                                                                                                                                                                                   Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                         DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                              Goodman, H.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130
0
0
0
                                                                                                                                                                                                                                     130
14
0
0
                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                       \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>1</u>4
                                                                                                                                                                                    94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94
                                                                                                                                                   PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                        14-FEB-2001
                                                                                                                                                    07-OCT-1997
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                     DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
Percent
                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
AR03157
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best I
Query
DB:
Alignment
Pred. No.:
Score:
Percent Si
Best Local
Query Matc
                                                                                                                                                                                  RESULT 7
AR065684
                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                         Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
FEATURES
                                                                                                                                                                          FOCUS
                                                                                                                                                                                                         멍
                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                      -Sn
                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                                ORIGIN
                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                               ORGANISM
                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
cent Similarity:
: Local Similarity:
cy Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ent Similarity:
Local Similarity:
Match:
                                                                                                                                                                                                                                                                                                                                      source
                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.
                                                                                                                                                                                                                                      857-
                                                                                                                                                                                                                                                                                                                                                                                                                                             N O
                                                          Unknown.

Unknown.

Unclassified.

(bases 1 to 131)

Haseloff,J., Brand,A., Perrimon,N. and Cell ablation using trans-splicing riboration: US 5849548-A 11 15-DEC-1998;

Location/Qualifiers

131

"""Nknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                      841-
                                                                                                                                                                                                                                                                                                 Scores:
                                      Scores
                                                                                                                                                                                                         5<u>4</u>
                                                                                                                                                   AR065684
Sequence 11
AR065684
AR065684.1
                                                                                                                                                                                                                                                                                                                                                                                                              AR031572
Sequence
AR031572
AR031572.
                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 131)
1 (bases 1 to 131)
Haseloff, J., Brand, A., Perrimon, N. and Good
Cell ablation using trans-splicing ribozyme
Patent: US 5866384-A 11 02-FEB-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                Unknown.
Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ù
                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGACAAA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
                                                                                                                                                                                                                                      (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                              11
                                                                                                                                                                                                                                                                                                                       . .131
/organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                      ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0.00137
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                   0.00138
69.00
100.00%
100.00%
6
0.00138
69.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                               GI:5945
                                                                                                                                                                                                                                                                                                                                                                                                                              m
                                                                                                                                                     GI:5995900
                                                                                                                                                                    m
                                                                                                                                                                                                                                                                                                                                                                                                                              HOM
                                                                                                                                                                    rom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 I49964
                                                                                                                                                                                                                                      AR031572
                                                                                                                                                                                                                                                                                                                      _type="unassigned
                                                                                                                                                                  patent
                                                                                                                                                                                                                                                                                                                                                                                                                             patent
                                                                                                                                                                                                                                                                                                                                                                                                                861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-130)
                                                                                                                                                                                                                                      (1-131)
                                                                                                                                                                                                                                                                                                                                                                                                                              131
US 51
                                                                                                                                                                   131
US 51
                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
Mismatches:
Indels:
Length:
Matches:
Conservati
Mismatches
Indels:
                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                              L bp
5866384
                                                                                                                                                                   . bp
                                                                                                                                                                                                                                                                                                                       DNA"
                                                                                                                                                                    Ŵ
                                                                                                                                                                    48
                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                 ribozymes
                                                                                                                                                                           DNA
                ive
         0
                                                                                                                                                                                                                                                                                                                                                                  Goodman, H.M
                                                                                                                                                                                                                                                     0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                00001
  131
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Α
                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                         9
                                                                                                                                                                                                         ū
                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                                                                                                                                           PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                       29-
                                                                                                                                                                           29-
                                                                                                                                                                                                                                                                                                                                                                                                                                       SEP-
                                                                                                                                                                                                                                                                                                                                                                                                                                       1999
                                                                                                                                                                           999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                               뮍
 S
```

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                               REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                           Percent Sim
Best Local
Query Match
                                                                                                                                                                                                                                                                                                                                                           Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
                                                                       Alignment Pred. No.:
                                                                                                                                                                                                                                         RESULT
I49961
                               Query
DB:
                                                                                                                                                                                                                                                                                                   US-
                                                                                                                                                                                                                                                                                                                  DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                       Percent Similarity:
Best Local Similarity:
Query Match:
                -Sn
                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                Score:
                                                                                                                                                                                                                                  FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -60
                                                                                                                                                                                                                                                                                                    09-85
                                                                                                                                                                                                                                                                                                                                                                                                            sourc
                                                                                                                         sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85
                85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \omega \omega
                                                                                                                                                                                                                                                                                                                                   Similarity: cal Similarity:
                                                                                                                                                                                                                                                                                                                                                                                      Unknown.

Unclassified.

(bases 1 to 131)

Haseloff, J., Brand, A., Perrimon, N. and Goodman, H.M.

Cell ablation using trans-splicing ribozymes

L Patent: US 6071730-A 11 06-JUN-2000;

Location/Qualifiers

131
                                                                         ••
                                                                                                                                                                                                                                                                                                                                                           ..
                                                                                                                                                                                                                                                                                                                                                                    Scores
                841
                                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                 Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
4
                                                                                                                                                                                                                                                                    5<u>4</u>
                                                                                                                                                                                                        149961
Sequence
149961
149961.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR097443
Sequence 11
AR097443
AR097443.1
                                                                                                                           1 (bases 1 to 131)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,
Cell ablation using trans-splicing ribozymes
Patent: US 5641673-A 11 24-JUN-1997;
Location/Qualifiers
                                                                                                                                                                                Unknown.
Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      μ
\vdash
                                                                                                                                                                         Unclassified.
                                                                                                                                                                                                                                                                                                    -4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1-
                                                                                                                                                                                                                                                                                                    (1-14)
                1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14)
                14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11
                                                                                                                                                                                                                          11
                                                                                                        /organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                          GI:2472181
                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ×
                ×
                               0.00138
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                  0.00138
69.00
100.00%
100.00%
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from
                                                                                                                          . 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:12806173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                         from patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR065684
                                                                                                                                                                                                                                                                                                   AR097443
               149961
                                                                                                        _type="unassigned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            patent
                (1-131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1-
                                                                                                                                                                                                                                                                                                    (1-131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13
US
                                                                                                                                                                                                                          131 bp
US 5641673
                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservativ
Mismatches:
Indels:
Gaps:
                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bp
5071730
                                                                                                          DNA"
                                                                                                                                                                                                                                                                                                                                             ive
                                 13
0
0
0
                                                                                                                                                                                                                                                                                                                      0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                    95
14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                   PAT
                                                                                                                                                                                                                                   07-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-FEB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001
```

a a <del>Maja</del>ra 1944 - Janes

· (4 .

```
RESULT 12
AR065682
                                                                  Percent
Best Loc
Query Ma
DB:
                                                                                              Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                          LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                       RESULT 11
AR031571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR031570
LOCUS
                                                                                                                                                                                                     KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                       Score:
Percent
Best Loc
                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                        Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                            Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                    Ş
                                                    Sn
                        밁
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                          Sn
                                                                                                                                                                                        RE
                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                         EFERENCE
AUTHORS
TITLE
JOURNAL
EATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                     0
                                                                                                                                                                                                                                                                                                           9
                                                                         cent Similarity:
: Local Similarit
cy Match:
                                                                                                                                                                                                                                                                                                                               ent Similarity:
Local Similarity
Y Match:
                                                     Φ
                                                                                                                                                  Bourc
                                                                                                                                                                                                                                                                                                                                                                                                         Bource
                                                                                                                                                                                                                                                                                                         857-
                                                    \boldsymbol{\omega}
                                                    ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                       Unclassified.

1 (bases 1 to 152)

1 (bases 1 to 152)

Haseloff, J., Brand, A., Perrimon, N. and Cell ablation using trans-splicing riberent: US 5866384-A 10 02-FEB-1999;

Patent: US 5866384-A 10 02-FEB-1999;

Location/Qualifiers

1. .152
                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                    Scores
                                                    ω
                                                                                                                                                                                                                                                                                                          œ
                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 152)
Haseloff,J., Brand,A., Perrimc
Cell ablation using trans-spli
Patent: US 5866384-A 9 02-FEB-
Location/Qualifiers
e 1. .152
                                                                                                                                                                                                                                                                                                          41
                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    54
                                                                                                                                                                                                                         AR031571
Sequence :
AR031571
AR031571.:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Unclassified.
1 (bases 1 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR031570
Sequence 9
AR031570
AR031570.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                      ហ
                                    \mathbf{\mu}
                                                                                                                                                                                                                                                                              ຫັ
                                                                                                                                                                                                     Unknown
                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                           μ
                     4
                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                    î
                                                                                                                                                                                                                                                                                                          (1-
                                                   14)
                                                                                 ty:
                                                                                                                                                                                                                                                                                                                                       ťу
                                                                                                                           1. .152
/organism="unknown"
/mol_type="unassigne
                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                            μ
                                                                                                                                                                                                                                                                                                                                                                                        /organism="unknown"
/mol_type="unassigned
                                                                                                                                                                                                                                          0
                                                   ×
                                                                                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ħ
                                                                 0.00162
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                       0.00162
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                           GI:5
                                                                                                                                                                                                                                         from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:594585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rom
                                                    AR0315
                                                                                                                                                                                                                                                                                                          AR0315
                                                                                                                                   _type="unassigned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              patent
                                                                                                                                                                                                                            945860
                                                                                                                                                                                                                                         patent
                                                    71
                                                                                                                                                                                                                                                                                                          70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                         (1-
                                                                                                                                                                                                                                                                                                                                                                                                                     Perrimon, N. a
ans-splicing r
02-FEB-1999;
                                                    \widehat{\Box}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SD
                                                                                                                                                                                                                                         ST.
                                                    15
                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                         <u>5</u> 55 25
                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ហហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 bp
                                                    2
                                                                                                                                                                                                                                                                                                          2)
                                                                                                                                                                                                                                         2 bp
5866384
                                                                                                                                    DNA"
                                                                                                                                                                                                                                                                                                                                                                                          DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ø
                                                                                                                                                                       and Goodmaribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                              and Goodma
                                                                                                                                                                                                                                                                                                                                                                                                                                     Goodman,
                                                                                                                                                                               Goodman,
                                                                 0 0 0 1 5
                                                                                                                                                                                                                                                                                                                        15
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ine
                                                                                                                                                                                                                                                 inear
                                     14
                      11
                                                                                                                                                                                                                                                                              116
                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ar
                                                                                                                                                                                                                                                 PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                                                                                                                                                                                                                 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-
                                                                                                                                                                                                                                                 SEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEP-1
                                                                                                                                                                                                                                                 999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      999
```

```
Score:
Percent Sim
Best Local
Ouery Match
                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
RESULT 14
AR097441
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                          TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment & Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                    Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                   Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL FEATURES
                                                                                                              Query
DB:
                                                                                                                                                                                                                                                                                                              RESULT 1
                                                                8
                                                                              Ş
                                                                                               -Sn
                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                     -Sn
                                                                                                                                                                                                                                                                                                                                                                                                Score:
Percent Similarity:
Best Local Similarity
                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                         ORGANIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANIS
                                                                                               -60
                                                                                                                                                                                                                                                                                                                                                                      09-85
                                                                                                                                                                                                                                                                                                                                                                                            Local
y Match
                                                                                                                                                                                                   sourc
                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sourc
                                                                                               -857-
                                                                                                                                                                                                                                                                                                                \overline{\omega}
                                                                                                                                                                                                                                                                                                                       w
                                                                                                                           Similarity:
al Similarity:
                                                                                                                                                                                 M Unknown.
Unclassified.
1 (bases 1 to 152)
1 (bases 1 to 152)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,
Cell ablation using trans-splicing ribozymes
Cell ablation using trans-splicing ribozymes
Patent: US 5849548-A 10 15-DEC-1998;
Location/Qualifiers
152
                                                                                               841
                                                                                                                                                             Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                    Scores
                                                                                                                                                                                                                                                                                                                                                                     41
                                                                75
       AR097441
Sequence 9
AR097441
AR097441.1
                                                                                                                                                                                                                                                                                AR065683
Sequence 1
AR065683
AR065683.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unclassified.

1 (bases 1 to 152)

Haseloff, J., Brand, A., Perrimon, N., Cell ablation using trans-splicing Patent: US 5849548-A 9 15-DEC-1998;

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
AR065682
AR065682.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR065
                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                       ហ
                                                                                                                                                                                                                                                                                                                                                     \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                                                                                                                                                                                                                      4.
                                                               À
                                                                                               (1-14)
                                                                                                                                                                                                                                                                                                                                                                      (1-14)
                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .152
/organism="unknown"
/mo1_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       φ
                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                     ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from
                        H
                                                                                                             0.00162
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                    0.00162
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                               from
                        rom
         GI:12806171
                                                                                                                                                                                                                                                                                 GI:5995899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:5995898
                                                                                               AR065683
                                                                                                                                                                                                                                                                                                                                                                     AR065682
                                                                                                                                                                                                                                                                                                                                                                                                                                                           type="unassigned
                        patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     patent
                                                                                                                                                                                                                                                                                               patent
                                                                                                                                                                                                                                                                                                                                                                     (1-152)
                                                                                               (1-152)
                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sn
                                                                                                                                                                                                                                                                                          15;
US
                       6 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152 bp
5849548
                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                    Length:
Matches:
Conservativ
Mismatches:
Indels:
                        52 bp
5071730
                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                 ច្ចស
                                                                                                                                                                                                                                                                                                2 bp
5849548
                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Goodn
                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                    ive
                                                                                                                                                                                                                                  Goodman, H.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goodman, H.M
                                                                                                               15
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                     0000
                                                                                                                                                                                                                                                                                                        linea
                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                116
                                                                                14
                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                        н
                                                                                                                                                                                                                                                                                                        PAT
                                 PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT
                                                                                                                                                                                                                                                                                                        29
                                 14-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-
                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                        H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EP-1999
                                                                                                                                                                                                                                                                                                         שי
                                                                                                                                                                                                                                                                                                         199
```

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                      Alignment Scores:
Pred. No.:
Score:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                 RESULT 15
AR097442
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
Search
Job tim
                                    망
                                                    Ś
                                                                      us-
                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                            -60-Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                      09-857-
 ime
                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                             857-
completed:
le : 2544 s
                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
Unclassified.
3 1 (bases 1 to 152)
5 Haseloff, J., Brand, A., Perrimon, N. and Goodman, H.M.
Cell ablation using trans-splicing ribozymes
L Patent: US 6071730-A 9 06-JUN-2000;
Location/Qualifiers
1. .152
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                Unclassified.

1 (bases 1 to 152)

1 (bases 1 to 152)

Haseloff, J., Brand, A., Perrimon, N. and Goodman,
Cell ablation using trans-splicing ribozymes
Cell ablation using trans-splicing ribozymes
Patent: US 6071730-A 10 06-JUN-2000;
Location/Qualifiers
1. .152

1. .152
                                                                      841-4
                                                                                                                                                                                                                                                                                                                                                                           841-4 (1-14)
                                   75
                                                                                                                                                                                                                                                                                                                                          75
                                                                                                                                                                                                                                                                           AR097442
Sequence 10
AR097442
AR097442.1
                                                                                                                                                                                                                                                   Unknown.
Unknown.
                                                    -
                                                                                                                                                                                                                                                                                                                                                           secs
                                                                      (1-14)
         December
                                                                                                                                                                                                                                                                                              10
                                                                      ×
                                                                                                                                                                                                                                                                                                                                                                            ×
                                                                                      0.00162
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                            0.00162
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                             GI:12806172
                                                                      AR097442
                                                                                                                                                                                                                                                                                                                                                                            AR097441
         Ņ
                                                                                                                                                                                                                                                                                             patent
         2004,
                                                                     (1-152)
                                                                                                                                                                                                                                                                                                                                                                            (1-152)
                                                                                                                                                                                                                                                                                              SU
          09:07:02
                                                                                                                                                                                                                                                                                              L52 bp
3 6071730.
                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                              Length:
Matches:
Conservative
Mismatches:
Indels:
                                                                                     Gaps
                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                 ive:
                                                                                                                                                                                                                        Goodman, H.M.
                                                                                      152
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                             152
14
0
0
0
                                                                                                                                                                                                                                                                                                       linear
                                   116
                                                                                                                                                                                                                                                                                                                                                           14
                                                     14
                                                                                                                                                                                                                                                                                                                                          116
                                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                       14-
                                                                                                                                                                                                                                                                                                       FEB-2001
```

This Page Blank (uspro)

```
Title:
Perfect so
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
Maximum
                                                                                                                                                                                                                                                                    Command line parameters:
-MODEL=frame+_p2n.model -DEV=xlh
-Q=/cgn2_1/USPTO_spool/US09857841/runat_03122004_160551_18575/app_query.fasta_
-DB=N_Geneseq_23Sep04 -QFMT=fastap -SUFFIX=p2n.rng -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US09857841_@CGN_1_1_470_@runat_03122004_160551_18575 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=0
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                       Resul
                                                                                                                                                                                                                                                       Databas
                                                                                                                                                                                                                                                                                                                                                                                                     Pos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    arche
                                                                                                                                                                                                                                                                                                                                                                                                                                                  al
                                                              No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                      u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95
                                                                                                                                                                                                                                                                                                                                                                                                      -processing:
   4400
                                                                                                          Pred. Necore s
                                                                                                                                                                                                                                                                                                                                                                                                                                                 number
                                                                                                                                                                                                                                                                                                                                                                                                                       DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   score:
                                                               S
                                                                ñ
                                                                                                                                                                                                                                                                                                                                                                                                                      seq
                                                                Ö
                                                                                                          No. is the nu greater than s derived by a
   \sigma\sigma\sigma\sigma\sigma\sigma
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic
   99999
                                                                                                                                                                                                                                                                                                                                                                                                                      length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
Xgapop 1
Ygapop 1
Fgapop
Delop
                                                                                                                                                                                                                                                                                                                                                                                                                                                  hits
 100.0
100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0S-09-8
                                                              Query
Match
                                                                                                                                              4134886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                December
                                                                                                                                                                                                                                                                                                                                                                                   Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyright
                                                                                                                                           Jeneseq_23Sep04:*
    geneseqn1980s:*
    geneseqn1990s:*
    geneseqn2000s:*
    geneseqn2001bs:*
    geneseqn2001bs:*
    geneseqn2002bs:*
    geneseqn2003bs:*
    geneseqn2003bs:*
    geneseqn2003cs:*
    geneseqn2003ds:*

                                                                                                                                                                                                                                                         eneseq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            857-
                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                       0
20000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10.
6.
                                                                                                                             numbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seqs,
                                                                                                          number of results
n or equal to the
analysis of the n
                                                                                                                                                                                                                                                                                                                                                                                    Match
Match
first
  53
771
772
772
773
976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2004,
                                                                U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26247105
   とととととら
                                                                                                                                                                                                                                                                                                                                                                                    0%
100%
45 SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                  chosen
 AAA30858
AAT34666
AAT34664
AAT17259
AAT34665
AAQ10461
                                                              ID
                                                                                                                                                                                                                                                                                                                                                                                     summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08:15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 m
                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                 parameters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.5
0.5
7.0
                                                                                                          predicted by chance is score of the result leads total score distributions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 ; Search (without a 225.435 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sidues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 p2n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ch time 326
it alignments
Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  model
                                                                                                                                                                                                                                                                                                                                                                                                                                                   8269772
 Aaa30858
Aat34666
Aat34664
Aat17259
Aat34665
Aaq10461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cell
                                                               Description
                                                                                                           to hav being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             updates/sec
                                                                                                                    printed,
Ubiquitin
Coat prot
Coat prot
Coat prot
Coat prot
Coat prot
Coat prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     വ
                                                                                                                                                                                                                                                                                                               0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                      C)
                                                                                                                                                                                                                                                                                                                                                                                                                                 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0000
```

		. 44																																		9	ω	7
42	4.0	42	42	42	42	42	42	42	42	4	42	43	43	43	43	44	44	44	44	44	44	44	44	44	45	<b>4</b> 5	61	64	64	64	69	69	69	69	69	69	69	69
0		0	0	0	0	0	0	0	0	0	0	2	2	2	2	•	Ċ		Ü	ω ·			ω ·	ω.	ហ •		<b>&amp;</b>	N	N	N	00.	00.	00.	00.	00.	100.0	00.	00
œ	α	00	0	0	J	0	U	UT	ហ	S	ហ	43	Ō	00	0	1000	00	1000	σ	62	36	20	0	31	ø	9	9	N	42	9	17	98	69	37	90	1066	00	00
Ν	N	N	N		11	4	w	N	N	w	12	σ	ထ	ထ	ហ	4	4	4	11	ω	11	11	ထ	12	10	10	w	N	μ	N	N	N	N	<b>-</b>	N	N	N	N
064	7 7 7	764	841	9724	179	2121	126	890	174	039	591	8177	251	245	6292	9683_2	9682	9682_2	148	0580	1526	150	3515	5197	1193	3772	320	227	024	364	510	510	510	111	750	AAT99545	739	046
Aat00644 Human AI	בומנים השוומנו	07648 Human	48414 Human	97241 Human	7977 Human	121 Human i	260 Arabid	683	42	Aac50398 Arabidops	9136	177 Human	Ada72516 Rice gene	54	• -	Continuation (24 o	_		Ō	Aca40580 Prokaryot	Abd15266 Pseudomon	Abd15071 Pseudomon	טי	2 Tra	Abz41931 N. gonorr	724	58209	Aat72272 Cucumber	N	Aaq03641 Cucumber	$\vdash$	Aaq76106 Cucumber	Aaq76107 Cucumber	Aan81111 Sequence	Aaz07505 Cucumber	9545 Cucumb	67395 Caulifl	

## ALIGNMENTS

```
RESULT 1
AAA30858
ID AAA
XX AAA
AC AAA
DT 19-
XX Ubi
XX Ubi
XX Ubi
XX Vbi
XX Vb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T 1
)858
AAA30
                                                                                                                                                                                                                                                               WO200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ubiquids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ubiqu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA30
                                                             11-DE
                                                                                                                                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                   11-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nicot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-SE
     (MOLE
                                                                                                                                                                                                  22-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          858;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           itin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           itin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            858 standard; DNA; 53 BP.
                                                                  7-1998;
                                                                                                                                 C-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-2000
                                                                                                                                                                                                                                                                 036129-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               iana tabacum.
     INST MOLECULAR AGROBIOLOGY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             monomer C-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            monomer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                  98WO-SG000103.
                                                                                                                                   98WO-SG000103
                                                                                                                                                                                                                                                                                                                      6. .47
/*tag= a
/product=
/partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein production;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                      "Ubiquitin_monomer_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell; ubiquitin promoter;
```

```
Alignment
Pred. No.:
Score:
Percent Si
Best Local
Query Matc
DB:
TANK BY AND THE LANG YEAR YEAR AND THE STANK BY AND THE S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
AAT34666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Production ubiquitin desired pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This sequence encodes the C-terminal fragment of a ubiquitin monomer. Invention relates to a method for enhancing production of a desired protein in a plant or plant cell by inserting a nucleic acid (NA) encoding a ubiquitin monomer upstream of a NA encoding the desired protein, where the fusion construct encodes a fusion protein and expression is not controlled by the ubiquitin promoter. The invention also relates to a NA acid vector a NA vector able to transform a plant cell, that comprises NA encoding a fusion protein having a ubiquitin monomer linked to a protein of interest and further, where expression the fusion construct is not under control of a ubiquitin promoter. The construct allows enhanced production of the desired protein in plants of the desired protein in plants.
                                                                                                                                                                                                                                        Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ent Similarity:
Local Similarity:
Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  plant
                                                                                                                                                                                                                                                                                                                                                                         Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fang
                                                                                          30-
                                                                                                                         07-
                                                                                                                                                         11-
                                                                                                                                                                                         WO9621018-A1
                                                                                                                                                                                                                                                                                                                                                                                                         16-OCT-2003
02-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                        Coat protein; resistance; s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT34666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-431604,
P-PSDB; AAY90255
                            Boeshore
                                                                                                                                                                                                                                                                                         Cucumbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAT3466
                                                         (ASGR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  equence
                                                                                          DEC-1994
                                                                                                                         JUN-1995
                                                                                                                                                           JUL-199
                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cores
                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ion of desir
in monomer of
protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ion of
                                                         ASGROW
                                                                                                                                                                                                                                                                                         mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B₽;
                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                        (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                        Of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18;
                          Mcmaster
                                                                                                                                                                                                                                                                                                                                        CP;
                                                         SEED
                                                                                         Q.
                                                                                                                         95WO-US007234
                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                          4US
                                                                                                                                                                                                                                                                                       virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chen
                                                                                                                                                                                                                                      Location/Qualifiers
3. .659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /37
                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             red protein coding seque
                                                                                                                                                                                                                                                                                                                                         cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.000262
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P
                                                                                                                                                                                                                                                                                                                                                                         V34
                                                         ဝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA30858
                                                                                          00367789
                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                           JR,
                                                                                                                                                                                                                                                                                         strain
                                                                                                                                                                                                                                                                                                                                                                         strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      771
                                                                                                                                                                                                                           Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence
                                                                                                                                                                                                                                                                                                                                         mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                           Tricoli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1-
                                                                                                                                                                                                                                                                                        V34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              İ
                                                                                                                                                                                                                                                                                                                                                                         0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plants c
e upstrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                       virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                                                                                         cucumber
                        DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                       CMV;
                         Reynolds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ų;
                                                                                                                                                                                                                                                                                                                                                                         mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plant of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cells
e gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JF,
                                                                                                                                                                                                                                                                                                                                                                        virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               by linking a encoding the
                         Carney
                                                                                                                                                                                                                                                                                                                                      V34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   m
```

```
RESULT
AAT346
                                                                                                                                                                                                                                                                                                                                                                            Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment :
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                         SXCCCCCXXXXPTTXXX
                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                             US-09-857-
                                                                                                                                                                                                                                                                                                                                                                                                 Percent
                                                                                                                                                                                                                                                                                                                                                                                    Local
y Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New is plants resist
                     plant:
resist
                                                                                                                         07-JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coat p
mosaic
infect
known
                                                                                                                                                                                                                    Coat
                                                                                                                                                                                                                                                                                                AAT3
                                     New
                                                    WPI; 1996-333993/33.
P-PSDB; AAR98893.
                                                                                                                                                        MO96
                                                                                                                                                                              Key
CDS
                                                                                                                                                                                                                                           Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                        quash,
infect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI;
                                                                                           (ASGR
                                                                                                                                         11-JUL-1996
                                                                                                                                                                                                                                                          16-OCT-2003
02-DEC-1996
                                                                                                                                                                                                                                                                                  AAT34664;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim
                                                                           Boeshore ML,
                                                                                                                                                                                                      Cucumi
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 771
                                                                                                         0-DE
                                                                                                                                                                                                                                                                                                        თ
                                                                                                                                                                                                                                                                                                        E W
                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                    isolated cucumber mosaic value, partic. of the family istant to infection.
                                                                                                                                                                                                                                                                                                                                                                                        Similarity:
al Similarity:
                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                    stance;
                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based (CP sequences. The genes may be used for producing plants such as cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                          Scores:
                                                                                                          2-1994;
                                                                                                                         N-1995;
                                                                                                                                                                                                      ber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s, partic. of the tant to infection.
                                                                                           -) ASGROW
                                                                                                                                                        L018-A1
                                                                                                                                                                                                                                                                                                                                                             141-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .996-333993/33
; AAR98895.
                                                                                                                                                                                                                                                                                                 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            olated
                                                                                                                                                                                                                                                                                                                               u
                                                                                                                                                                                                      mosaic
                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fig 3; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                             (1-14)
                                                                                                                                                                                                                     .00
                                                                                                                                                                                                                                                          (revised)
                                                                                                                                                                                                                                            0f
                                                                                                                                                                                                                                                                                                                                                                                                                                         BP; 176 A; 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cucumber mosaic virus coat protein DNA - used c. of the family Cucurbitaceae or Solanaceae,
                                                                                                                                                                                                                            ÇÞ;
                                                                           Mcmaster
                                                                                           SEED
                                                                                                          94US-00367789.
                                                                                                                         95WO-US007234.
                                                                                                                                                                                                                                            the
                                                                                                                                                                                                     virus; strain V27.
                                                                                                                                                                      Location/Qualifiers
3. .659
/*tag= a
                                                                                                                                                                                                                             cucumber mosaic virus;
                                                                                                                                                                                                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                                                 DNA;
                                                                                                                                                                                                                                                                                                                                                                            0.00572
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                           V27 strain of
                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                             AAT34666
                                                                           JR,
                                                                                                                                                                                                                                                                                                 772
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç;
                                                                           Tricoli
                              virus coat protein
/ Cucurbitaceae or 8
                                                                                                                                                                                                                                                                                                                                                             (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                                         183 G; 213
                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                            cucumber
                                                                           DM,
                                                                                                                                                                                                                            CMV;
                                                                           Reynolds
                                                                                                                                                                                                                                                                                                                                                                                                                                         ij
                                                                                                                                                                                                                                           mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                             V27;
                              n DNA - used
Solanaceae,
                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽;
                                    DNA -
                                                                                                                                                                                                                                                                                                                                                                             771
14
0
0
                                                                           JF,
                                                                                                                                                                                                                                            virus
                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                          Other;
                                                                            Carney
                                                                                                                                                                                                                             V34;
                              to produce which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     which are
                                                                                                                                                                                                                             A35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
```

Claim

٠. در

Fig

; dd08

English

SSSSSSSSS

Coat

```
Alignment
Pred. No.:
Score:
Percent Si
Best Local
Query Matc
DB:
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
AAT1729
                                                                                                                                                                                                                                                                                                                                                                                                                                             . 8
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local S:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mosaic virus (CMV) were isolat infected plant tissue by PCR a known CP sequences. The genes quash, cucumber, peppers and tinfection. (Updated on 16-OCT-
                                                                                                                                                                                                                                                                                                           Coat
resi
                                                                                                                                                                                                                                                                                                                                                                              AAT1
                                                                                                                                                                                                                                                                  Key
               Coat protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber mosaic virus (CMV) were isolated. The CMV CP genes were isolated from infected plant tissue by PCR amplification of cDNA using primers based (known CP sequences. The genes may be used for producing plants such as quash, cucumber, peppers and tomatoes which are resistant to CMV infection. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                           New isolated cucumber mplants, partic. of the resistant to infection.
                                                                                                                             ₽-
                                                                                                                                                                                                                                                                                                                                     Coat
                                                                                                                                                                                                                                                                                                                                                                                                         25
                                                                                                                                                                                                                                                                                                                                                      16-OCT-2003
02-DEC-1996
Sequence
                                                                           Disclosure;
                                                                                                                                                      Boeshore
                                                                                                                                                                                       Ü
                                                                                                                                                                                                        07-JUN-1995;
                                                                                                                                                                                                                         11-JUL-1996
                                                                                                                                                                                                                                         WO9621018-A1
                                                                                                                                                                                                                                                                                           Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                AAT1725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                       (ASGR-) ASGROW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   857-
                                                                                                                                                                                        0-DEC-
                                                                                                                                                                                                                                                                                                                                                                                                         4 0
                                                                                                                               ΨĤ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity:
al Similarity:
                                                                                                                             ; 1996-333993/33
SDB; AAR93803.
                                                                                                                                                                                                                                                                                                          t protein;
istance; sa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
ic virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rotein (CP) genes of the V27, V33, V34 and A35 strain of cucumber virus (CMV) were isolated. The CMV CP genes were isolated from and plant tissue by PCR amplification of cDNA using primers based by sequences. The genes may be used for producing plants such as cucumber, peppers and tomatoes which are resistant to CMV con. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                Ø
                                                                                                                                                                                                                                                                                                                                                                               φ
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
                                                                                                                                                                                       .994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     772
                                                                                                                                                     ΜĽ,
                                                                                                                                                                                                                                                                                           mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
 772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-14)
                                                                          Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₿P;
                                                                                                                                                                                                                                                                                                                                                      (revise (first
ВP;
                                                                                                                                                                                                                                                                                                                                     O
H
                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                   CP;
                                                                                                                                                      Mcmaster
                                                                                                                                                                       SEED
                                                                                                                                                                                       9
                                                                                                                                                                                                        95WO-US007234
                                                                          8
                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                                                                          Location/Qualifiers
3. .659
/*tag= a
                                                                                                                                                                                                                                                                                           virus;
                                                                                                                                                                                        4US-
                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177 A;
175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                    cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.00573
69.00
100.00%
100.00%
100.00%
                                                                         ; dd08
                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                              ed)
                                                                                                                                                                                                                                                                                                                                     A35
                                                                                                                                                                       ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT34664
                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                       00367789
P,
                                                                                                   mosaic ve family
                                                                                                                                                      JR,
                                                                                                                                                                                                                                                                                           strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     202 C;
                                                                                                                                                                                                                                                                                                                                     strain
                                                                                                                                                                                                                                                                                                                                                                                                772
 N
 01
                                                                           English
                                                                                                                                                                                                                                                                                                                     mosaic
                                                                                                                                                                                                                                                                                                                                                                                                ВP
Ç
                                                                                                                                                       Tricoli
                                                                                                    virus coat protein
/ Cucurbitaceae or {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -1
                                                                                                                                                                                                                                                                                           A3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182 G;
                                                                                                                                                                                                                                                                                                                                      of.
185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .772)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservativ
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                    virus;
                                                                                                                                                                                                                                                                                                                                      cucumber
ဂ္
                                                                                                                                                      DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211 T;
 211
                                                                                                                                                                                                                                                                                                                    CMV;
                                                                                                                                                       Reynolds
Ţ;
                                                                                                                                                                                                                                                                                                                                      mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
 0
                                                                                                                                                                                                                                                                                                                    V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ġ;
□;
                                                                                                    Solanaceae
                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77
0
0
0
                                                                                                                                                      JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                      virus
 Q
                                                                                                                                                                                                                                                                                                                    V33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                  44
                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                            •
 Other
                                                                                                            used
                                                                                                                                                       Carney
                                                                                                                                                                                                                                                                                                                     ∵
                                                                                                    to produce which are
                                           ဗ္ဗ
```

```
Alignment
Pred. No.:
Score:
Percent Si
                                                       Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best I
Query
                     Score:
Percent
 Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
Y Match
       Local
y Match
                                                                                                                                    New is plants resist
                                                                                                                                                                                                                                                                                                                                                      16-0CT
02-DEC
                                                                                                                                                                                                                                                                                                                                                                            AAT34
                                                                                                                                                                                                                                                                                                                                                                                        T 5
1665
AAT3
                                                                      known
quash,
infect
                                                                                                                                                                 WPI; 1
                                                                                                                                                                                                                  30-DE
                                                                                                                                                                                                                                                                                                                                        Coat
                                                                                            mosaid
                                                                                                                                                                                                                                             11-JUI
                                                                                                                                                                                                                                                            W0962
                                                                                                                                                                                                                                                                                Key
CDS
                                                                                                                                                                                                                                                                                                                    resi
                                                                                                                                                                                                                                                                                                                          Coat
                                                        Seque
                                                                                                         Coat
                                                                                                                                                                                      Boesh
                                                                                                                                                                                                                                07-JUI
                                                                                                                                                                                                                                                                                                     Cucumi
                                                                                                                       Claim
                                                                                                                                                                                                    (ASGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                 857
                     Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity: al Similarity:
        Similarity: al Similarity: tch:
                                                                                                                                                                                                                                                                                                                    Œ
                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ••
                                    ••
                                                                                                                                                                                                                                                                                                                                                                            665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scores
                                                                                                                                     solated cucumber mosaic virus coat protein DNA - used s, partic. of the family Cucurbitaceae or Solanaceae, tant to infection.
                                                                                                                                                                                     ore ML,
                                                                                                                                                                                                                                                                                                                                                                                          599
                                                                                                                                                                                                                                                                                                                                                      T-2003
C-1996
                                                                     protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based CP sequences. The genes may be used for producing plants such as , cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                         protein
                                           Scores:
                                                         nce
                                                                                                                                                                1996-333993/33.
B; AAR98894.
                                                                                                                                                                                                                                N-1995;
                                                                                                                                                                                                    -) ASGROW
                                                                                                                                                                                                                                              5-1996
                                                                                                                                                                                                                                                            L018-A1
                                                                                                                                                                                                                                                                                                      per mosaic
                                                                                                                                                                                                                                                                                                                   cance; ss.
                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                       13; Fig 2; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                      w
                                                         773
                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-14)
                                                                                                                                                                                                                                                                                                                                                      (revised)
(first en
                                                        BP;
                                                                                                                                                                                                                                                                                                                                         of the
                                                                                                                                                                                                                                                                                                                          CP;
                                                                                                                                                                                      Mcmaster
                                                                                                                                                                                                     SEED
                                                                                                                                                                                                                  94US-00367789
                                                                                                                                                                                                                                95WO-US007234.
                                                                                                                                                                                                                                                                                                      virus;
                                                                                                                                                                                                                                                                        Location/Qualifiers
3. .659
/*tag= a
                                                        175 A; 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                                           cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.00573
69.00
100.00%
100.00%
100.00%
2
0.00574
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                                         V33 strain of cucumber mosaic
                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT17259
                                                                                                                                                                                                                                                                                                      strain V33.
                                                                                                                                                                                                                                                                                                                                                                                           773 BP.
                                                                                                                                                                                                                                                                                                                           mosaic
                                                        Ç
                                                                                                                                                                                      Tricoli
                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-772)
                                                          185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                           virus; CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                        G;
                                                                                                                                                                                      MG
MG
                                                         213
                                                                                                                                                                                      Reynolds
                                                        ;;
                                                          0
                                                                                                                                                                                                                                                                                                                           V27;
                                                        u;
773
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                772
14
0
0
                                                                                                                                                                                      JF,
                                                                                                                                                                                                                                                                                                                                         virus
                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                       44
                                                          Other;
                                                                                                                                                                                       Carney
                                                                                                                                             which are
                                                                                                          of cucumber
                                                                                                                                                                                                                                                                                                                            A35
```

US-09-

85

841-4

(1-14)

×

**AAT34665** 

(1-773)

```
å D
                                                                            Alignment
Pred. No.:
Score:
                                                Best I
Query
DB:
                    S
                                   US-
                                                                       Percent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                   -60
                                                                                                                                                                                                                  Transgenic culture on resistant t
                                                                                                                                                                                                                                               WPI; 19:
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                       27-AUG-2003
25-MAR-2003
16-APR-1991
                                                        ent Similarity:
Local Similarity:
/ Match:
                                                                                                                      The gene was isolated from a plasmid (pUC18) containing DNA complementate to RNA 3 of the virulent strain FNY, isolated in New York on infected melons. The sequence includes a leader sequence, coding region and 3' not coding region. The leader sequence is the same length as that of the Japanese Y strain of CMV. Transgenic melon plantlets containing the sequence introduced via an Agrobacterium tumefaciens intermediate are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10462. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct OS field.)
                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                            EP412912
                                                                                                                                                                                                                                                                                                                                                                                             Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ1046
                                                                                                                                                                                                                                                                                   (BIOC-)
                                   \boldsymbol{\omega}
                                   U
                                                                                                                                                                                                                                                                                                                              -FEB-1991
                                                                                                                                                                                                                                                                                                 AUG-1989;
                                                                                                                                                                                                                                                      1991-
                                  841
                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                          re
                                                                                                                                                                                                     15,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                    Σ,
      ú
                    \vdash
                                                                                                                                                                                                                                                                                                               1990;
                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                           \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (L)
                                                                                                                                                                                                                                               1-046027/07
AAR10652.
                                                                                                                                                                                                                                                                                   BIOCEM
                                                                                                                                                                                                                                                                                                                                            -A
                                                                                                                                                                                                                                                                                                                                                                                                           istanc
                                                                                                                 to CMv.
) (Updated to correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MetAs
     MetAspLysSerGluSerThrSerAl
                                                                                                                                                                                                                                                                                                                                                                                             mosaic
                                   4
                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stan
                                                                                                                                                                                                                    ç
                                                                                                                                                                                                    Page
                                                                                                                                                                                                                 melon plantlets specific medium to cucumber mosai
                                                                                                          76
                                  1-
                                                                                                                                                                                                                                                                     Bentahar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         - Þ
- 8
                                                                                                         ₿₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                       (revised)
(revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dard;
                                   14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sakrīds
| | | | |
                                                                                                                                                                                                                                                                                                                                                                                                           ው
                                                                                                                                                                                                     17;
                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                   SA
                                                                                                                                                                                                                                                                                                               90EP
                                                                                                                                                                                                                                                                                                 89FR-00010848
                                                                                                                                                                                                                                                                                                                                                         Location/Qualif
75. .731
/*tag= a
/product= "CMV
                                                                                                                                                                                                                                                                                                                                                                                             virue
                                                                                                                                                                                                                                                                                                                                                                                                         capsid
                                                                                                          224
                                  ×
                                                                                                                                                                                                    44pp;
                                                 27760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - Œ
                                                      0.00751
69.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                         0f
                                  AAQ104
                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             00402282
                                                                                                        A;
                                                                                                                                                                                                                   mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                         Cucumber
                                                                                                                                                                                                                                                                     Noe1
                                                                                                          249
                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                    French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                  σ
                                                                                                                                                                                                                  prodn. f
for new
ic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 76
                                  μ
                                                                                                        Ç
                                                                                                                                                                                                                                                                     Ζ
                                1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \square
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ď
                                                                                                                                                                                                                                                                                                                                                                               fiers
                                                                                                         230
                                                                                                                                                                                                                                                                                                                                                         t1
8
                                  976)
                                                                                                                                                                                                                                                                                                                                                                                                                         Mosaic
                                                                                                                                                                                                                                                                                                                                                          rain
                                                                                                                                                                                                                                                                    Perret
     AlaGlyArgAsnArgAr
||||||||||||||
|CTGGTCGTAACCGTCG
                                               Length:
Matches:
Conservative
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                           Cucumi
                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                         from to
                                                                                                        ຸດ
                                                                                                          273
                                                                                                                                                                                                                                                                                                                                                          YNG
                                                                                                                                                                                                                                                                                                                                                                                                                         ۲
                                                                                                                                                                                                                                                                                                                                                                                                           Œ
                                                                                                                                                                                                                                                                     \mathbf{c}_{\mathbf{i}}
                                                                                                                                                                                                                         ransformed shoots formed plants etc
                                                                                                                                                                                                                                                                                                                                                                                                           melo;
                                                                                                                                                                                                                                                                                                                                                                                                                         Bur
                                                                                                        Ţ;
                                                                                                                                                                                                                                                                                                                                                         capsid
                                                                     ive:
                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                         \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                         train
             GArg
                                                                                                         Ç
                                                protein"
                                                                                                         0
      116
                    14
                                                                                                          Other;
                                                                                                                                                                                                                                                                                                                                                                                                                          FNY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44
                                                                                                                                                                       complementary
n infected
ion and 3' non
                                                                                                                                                                                                                         ьу
евр
                                                                                                                                                                                                                                two=
                                                                                                                                                                                                                                 Œ
                                                                                                                                                                                                                                ita
                                                                                                                                                                                                                                Бe
```

```
Score:
Percent
Best Loc
Query Ma
                 Ş
                                                                                                   Ali
Pre
 멂
                                     SD
                                                                                                   ignment
                                     09
                                                               ent Sim
Local
y Match
                                                                                                                                            The gene was isolated from the virulent French strain 117F of CMV. Tomate plantlets at the 2-leaf stage were infected with CMV strain 117F. 15 days post-infection, the virus was purified from the infected leaves and cDNA was synthesised from RNAs 1,2,3 and 4. After purification and selection by standard techniques, cDNA complementary to RNA 4 was found to encode the capsid protein. It was recloned into "Blue scribe" plasmids and sequenced. Transgenic melon plantlets containing the sequence introduced via an Agrobacterium tumefaciens intermediate are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10461. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.) (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-AUG-2003
25-MAR-2003
16-APR-1991
                                                                                                                            Seque
                                                                                                                                                                                                                                                                                                                                                                                       11-AUG
                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                    Transgenic melon plantlets prodn. from transformed shoots - culture on specific medium for new transformed plants etc., resistant to cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                             EP412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAQ10
                                                                                                                                                                                                                                                                                                                                                    Deboth M,
                                                                                                                                                                                                                                                                                                                                                                      (BIOC
                                                                                                                                                                                                                                                                                                                                                                                                         09-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                            国
                                                                                                   ••
                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       462
                                                                                                                                                                                                                                                                                                                                                                      -) BIOCEM
                                                                                                                                                                                                                                                                                                                                                                                        3-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                              912-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             per mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             resistance; capsid protein;
                                     141
                                                                                                                              92
                                                                        nilarity:
Similarity:
                                                                                                                                                                                                                                                                                                                         991-046027/07.
; AAR10653.
                                                                                                                                                                                                                                                                  16; Page 19; 44pp; French.
                  Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                             1007
standard;
                                                                                                                                                                                                                                                                                                                                                     Bentahar
                                     (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
(revised)
(first entry)
                                                                                                                              BP;
                                                                                                                                                                                                                                                                                                                                                                      SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                          90EP-00402282.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
54. .710
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product=
                                   ×
                                                                                                                              227
                                                    0.00778
69.00
100.00%
100.00%
100.00%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0f
                                   AAQ10462
                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                        00010848
                                                                                                                             A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumber
                                                                                                                                                                                                                                                                                                                                                     Noel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1007
                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                                                                                               "CMV strain
                                                                                                                             <u>..</u>
                                                                                                                                                                                                                                                                                                                                                    Σ
                                    (1-1007)
                                                                                                                              247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cucumis melo; ss.
                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                     Perret
                                                                                                                              <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                117F
                                                                                                                              274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Virus
                                                                                                                                                                                                                                                                                                                                                     C
                                                                                                                             <del>;</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                              capsid protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               strain
                                                                                                                              0
                                                                                                                              u;
                                                      1007
14
0
0
                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                117F
                                                                                                                              Other;
                                                                                                                                                                                                                                                                                             евр.
                                                                                                                                                                                                                                                                                                       by two=stage
```

RESULT

Φ

```
AAQ67395
XX
AC
AAQ67395
XX
AC
AAQ67395;
XX
Cauliflow
XX
Cauliflow
XX
Cauliflow
XX
Cauliflow
XX
Cauliflow
XX
Cauliflow
XX
PN
FR2701960
XX
FR2701960
XX
PN
FR2701960
XX
FT
CDS
FT
C
DT XX
                                                                                                                                                                                                                                                                                Alignment
Pred. No.:
Score:
Percent Si
                                                                                             RESULT
AAT995
                                                                                                                                                                                                                                    Best I
Query
DB:
                                                                                                                                          멍
                                                                                                                                                                        ঠ
                                                                                                                                                                                                        S
                                                                                                                                                                                                        -09-
                                                                                                                                                                                                                                                                 ent Similari
Local Simil
                                                                                                                                                                                                                                                                                                                                                                                          The RNA encoding the capsid protein of cauliflower mosaic virus (targetted by a nucleic acid sequence called a "polyribozyme". The polyribozyme has endoribonuclease activity and is able to inactivity encoding the viral capsid protein. The polyribozyme comprise several catalytic regions derived from ribozymes and confers compressistance to virus. See AAQ67391-94. (Updated on 25-MAR-2003 to PN field.)
                                                                            )545/c
AAT995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New polyribozyme contg. several catalytic regions in complementary sequence - can inactivate gene for viral capsid protein, esp. for of new virus resistant transgenic plants, also DNA sequence encodi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cauliflower | polyribozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-MAR-2003
12-APR-1995
  25-MAR-2003
21-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure;
                                                AAT99545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FR2701960-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cauliflower
                                                                                            45 9
                                                                                                                                                                                                        Φ
                                                                                                                                                                                                                                                      Match:
                                                                                                                                                                                                        S
                                                                                                                                                                                                        7-841
                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         flower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .994-
                                                                             45
                                                                                                                                          ហ
                                                                                                                                                                                                                                                                                                                                  cores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1993;
                                                                                                                                          4
                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENE
                                                                                                                                                                                                                                                                                                                                                                1007
                                                                                                                                         86
                                                                            standard;
                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perez
                                                                                                                                                                                                                                                                ity:
larity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       281767/35.
R57968.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  andard;
                                                                                                                                                                                                       1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (revised)
(first en
(revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHEARS
                                                                                                                                                                                                                                                                                                                                                                B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     saic
                                                                                                                                                                                                        14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gaic virus;
inactivate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93FR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ,
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ν
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54. .710
/*tag= a
/product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FR-00002269
                                                                                                                                                                                                     ×
                                                                                                                                                                                                                                                                                                                                                                227
                                                                                                                                                                                                                                    0.00778
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     virus
                                                                             CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .710
                                                                                                                                                                                                      AAQ67395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 00002269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gruber
   entry)
                                                                                                                                                                                                                                                                                                                                                                A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  capsid
                                                                             1066
                                                                                                                                                                                                                                                                                                                                                                259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CMV; capsid p inactivation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВP
                                                                                                                                                                                                                                                                                                                                                                Ç
                                                                                                                                                                                                        (1-1007)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Baudot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                247
                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prot
                                                                                                                                                                                                                                                                                                                                                                <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein; coat

i; resistance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     011ivo
                                                                                                                                                                                                                                                                                                                                                                Ŧ;
                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequenc
                                                                                                                                                                                                                                                                                                                                                                Ų;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O
                                                                                                                                                                                                                                       000011
                                                                                                                                                                                                                                                                                                 .4
                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                          bzyme comprises confers complete corr
                                                                                                                                                                       14
                                                                                                                                          95
                                                                                                                                                                                                                                                                                                                                                                Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         encoding it.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ivate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O
                                                                                                                                                                                                                                                                                                                                                                                                                correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ре
                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
```

S

μ

MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg

US-

-60

857-

341-4

(1-14)

×

**AAT99545** 

(1-1066)

```
Alignment Pred. No.:
                      Percent
Best Loc
                                       Score:
     Query
DB:
                                                                             This cDNA clone of cucumber mosaic virus (CMV) RNA-3 includes domain F of the subgenomic promoter of viral RNA, the coat protein gene, its leader sequence, and the tRNA-like 3'-terminal region of RNA-3. It was prepared by amplifying a fragment of CMV cDNA-3 from clone pCR-CMVIRNA3 by PCR (see also AAT99548-49). The gene construct is introduced into a vector containing a promoter active in plant cells in antisense orientation relative to the promoter. A claimed recombinant vector comprises the plant promoter, the antisense gene construct and a terminator which is functional in the plant. In addition to CMV, viral RNA may also be used from tobacco mosaic virus and potato virus. Claimed transgenic plants cresistant to viral infection. In particular, their genomes. They are resistant to viral infection. In particular, they are resistant to CMV. Within the antisense gene construct, the interfering activity of the cantisense activity performed by the coat protein gene, allows production of plants having 100% resistance to CMV. (Updated on 25-MAR-2003 to correct PR field.)
Local Match
                                                                                                                                                                                                                                                                                            Preparanti:
                                                                             Sequer
                                                                                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       promo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Trans
                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ഠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                                                                                                                                                     Cellini
                                                                                                                                                                                                                                                                                                                                                                        (META
                                                                                                                                                                                                                                                                                                                                                                                           09-MA
                                                                                                                                                                                                                                                                                                                                                                                                              07-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                 12-NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Đτ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   908d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  وُّا
                     imilarity:
l Similarity:
                                                                                                                                                                                                                                                                                                      ring t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genic plant;
protein; ant
                                                           Scores
                                                                                                                                                                                                                                                                                             cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eptide
                                                                               nce
                                                                                                                                                                                                                                                                                                                                    1997-538620/50.
                                                                                                                                                                                                                                                                                                                                                                                          1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    181-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ber
                                                                                                                                                                                                                                                                                                                                                                        -) METAPONTUM
                                                                                                                                                                                                                                                                                                                                                                                                                                 7-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               per mosaic
                                                                                                                                                                                                                                                                          ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ë
                                                                                                                                                                                                                                                                                                                                                   ্ম
                                                                               1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mosaic
                                                                                                                                                                                                                                                                                                     transgenic plants
                                                                                                                                                                                                                                                                                                                                                     Grieco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antisense
                                                                              BP;
                                                                                                                                                                                                                                                                          10;
                                                                                                                                                                                                                                                                                                                                                                                           96IT-MI000927.
                                                                                                                                                                                                                                                                                                                                                                                                              97EP-00201379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product= "co
956. .1029
/*tag= c
/note= "coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1030.
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1. .299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *tag=
                                                                                                                                                                                                                                                                        18pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            virus
                                                                               299
    0.00831
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                        AGROBIOS SCRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .1066
                                                                               P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "F sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resistance;
gene; ss.
                                                                                                                                                                                                                                                                          English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ထမ
                                                                               251
                                                                                                                                                                                                                                                                                                      s resistant containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA
                                                                              <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                               273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fragment
            Conservative Mismatches: Indels:
   Gaps:
                                         Matches:
                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of
                                                                              <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   leader
                                                                                                                                                                                                                                                                                                       to I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sub-genomic
                                                                               243
                                                                                                                                                                                                                                                                                                      RNA virus infection viral coat protein
                                                                                                         protein gene, allows production (Updated on 25-MAR-2003 to
                                                                             ..
..
                                 ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             resistance;
                                                                               0
                                                                               Ų;
    1066
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     promoter"
                                                                               0
                                                                               Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RNA virus;
                                                                                                                                                                                                                                                                                                      gene,
                                                                                                                                                                                                                                                                                                       using
ene, e
                                                                                                                                                                                                                                   prepared
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
S
S
S
                                                                                                                                                           are
```

```
RESULT 10
AAZ07505/c
ID AAZ07505
                                                                                                                                        Alignment
Pred. No.:
Score:
RESULT
AAN8111
ID AF
XX
AC AF
                                                                     Ş
                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                           8
                                                                                       us-
                                                                                        09
                  T 11
1111
AAN81111
                                                                                                                                                                                                                                                                                                                                           Preparing antisense
                                                                                                                                                                                         The invention relates to preparing transgenic plants resistant to RNA virus induced infections that comprises integrating an antisense gene construct into the plant genome. The construct comprises: (a) an F domain of a subgenomic promoter of cucumber mosaic virus (CMV); (b) downstream from the subgenomic promoter, a leader sequence of a coat protein gene of CMV; (c) downstream from the leader sequence, a gene encoding a CMV coat protein gene. The method is useful for producing plants which are resistant to infection by RNA based viruses. The gene construct gives higher levels of resistance compared to antisense constructs which are capable of complementing with different domains of genomic RNA of CMV. This forms the antisense construct of the invention
                                                                                                                                                                                                                                                                                                                                   anti:
                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Transgenic plant; CMV; promoter; co
  AAN81111;
                                                                                                                                                                                                                                                                                                                                                                                                                                         09-MAY-1997;
                                                                                                                                                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                                                                                      Cellini
                                                                                                                                                                                                                                                                                                                                                                                                                        - YAM-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-SEP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US5959181-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ07505
                                                                                                                                                                                                                                                                                                                                                                                                       (META-)
                                                                                        857-
                                                                                                                                                                           equence
                                                                                                                                                           Scores
                                                      Ø
                                                                                        \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                   sense gene
cucumber m
                                                                                                                                                                                                                                                                                                                                                                     1997-538620/50
                                                                                                                                                                                                                                                                                                                   2;
                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                       1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1999
                                                                     μ
                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          σ
                                                                                                                                                                                                                                                                                                                                                                                                       METAPONTUM
                                                                                                                                                                                                                                                                                                                                                                                      Δĵ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mosaic
                                                    106
                                                                                                                                                                                                                                                                                                                  Fig
                   8t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                  transgenic
                   andard;
                                                                                      (1-14)
                                                                                                                                                                                                                                                                                                                                                                                      Grieco
                                                                                                                                                                            J
                                                                                                                                                                                                                                                                                                                   ,.
H
                                                                                                                                                                                                                                                                                                                                 nnsgenic plants
one constructs constructs constructs constructs constructs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                          B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nt; RNA
coat pr
                                                                                                                                                                                                                                                                                                                                                                                                                        96IT-MI000927
                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-00854170
                                                                                                                                                                                                                                                                                                                 15pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            virus
                                                                                       ×
                                                                                                                                                                           297
                                                                                                      0.00832
69.00
100.00%
100.00%
100.00%
                   DNA;
                                                                                                                                                                                                                                                                                                                                                                                     PD;
                                                                                                                                                                                                                                                                                                                                                                                                       AGROBIOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NA virus;
protein ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        :DNA;
                                                                                       AAZ07505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                          A;
                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (CMV)
                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1067
                                                                                                                                                                           250
                   79
                                                                                                                                                                                                                                                                                                                                           resistant containing
                                                                                                                                                                                                                                                                                                                                                                                                       SCRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    anti
                                                                                      (1-1
                                                                                                                                                                           Ç
                   Ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₩
                   ם
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U
                                                                                                                                                                           276
                                                                                       .067)
                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sense construct;
infection; RNA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                           ດ
;
                                                                                                                                                                                                                                                                                                                                            to I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                                           244
                                                                                                                                                                                                                                                                                                                                           RNA virus infection viral coat protein
                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone
                                                                                                                                                                           0
                                                                                                                                                                           ;
                                                                                                       1067
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fragment
                                                                                                                                                                           0
                                                                     14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           915
                                                     91
                                                                                                                                                                            Other;
                                                     ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mosaic
                                                                                                                                                                                                                                                                                                                                            gene,
                                                                                                                                                                                                                                                                                                                                                   usin
                                                                                                                                                                                                                                                              gene of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                 domain
                                                                                                                                                                                                                                                                                                                                            രയ്
                                                                                                                                                                                                                                                                                                                                           ώ
```

```
Alignment
Pred. No.:
Score:
 EWX EXT DIX AC X DIA AQ7
                                                                                                                                                                                                          g
                                                                                                                   S
                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                        RESULT
                                                                                                                                   us-09-
                                                                              76107
                                                                                                                                                                                                                                                                                                                                                                       20-FEE
25-FEE
18-FEE
  Cucumb
virus
                                                          AAQ76
                                                                                                                                                                                                                       This DNA is produced on screening of a plasmid library and is used to transform plant cells which subsequently produce the coat prot- ein of cucumber mosaic virus (CMV) strain Y. This protein is not synthesised in natural plant cells. The resistance to CMV infect- ion, provided by the DNA, is shown in plant cells and redifferent- iated plant bodies. See also AAN81110. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                     WPI; 1
P-PSDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAF
                                                                         AAQ76
                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                          Furus
                                                                                                                                                                                                                                                                                                                                                                                                                                 EP279
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
CDS
                                     25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                     18-FEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                       Cucumber mosaic
                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                  Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cucum
                                                                                                                                                                                                                                                                                                                                                         (TAKE
                                                                                                                                                                                                                                                                                                                                                                                                                    24-AU(
                                                                                                                                                                                   No.:
                                                                                                                                   85
                                                                                                                                                                                                                                                                                               þ
                                                                                                                                                                                                                                                                                                       Ö
                                                                                                                                                                                                                                                                                                                                                                                   B-1987;
                                                                                                                                                                                            Scores
                                                                                                                                                                                                                                                                                                                                                                       B-1987;
B-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R-2003
V-1990
                                                                         107
 resistance;
                                                           107;
                                                                                                      418
                                                                                                                                                                                                                                                                                               oding for the coat
                                                                                                                                                                                                                                                                                                                     1988-236708/34.
B; AAP80509.
                                                                                                                                                                                                                                                                                                                                           awa
                                                                                                                                                                                                                                                                                                                                                                                                     3-1988
                                                                                                                                                                                                                                                                                                                                                                                                                    3-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                  433-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  per mosaic
                                                                                                                                   41-
                                                                                                                    \mathbf{L}
                                                                                                                                                                                                                                                                                                                                                          TAKEDA
                                                                                                                                                                                                                                                                                                                                           H,
                                                                                                                                                                                                          1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contg.
                                                                                                     standard;
                                                                                                                                   4
                                                                                                                                   (1-14)
                                                                                                                                                                                                                                                                                  Page ?;
                                    (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first en
                                                                                                                                                                                                                                                                                                                                           Onda H,
                                                                                                                                                                                                         B₽;
                                                                                                                                                                                                                                                                                                                                                                       87JP-00038288.
87JP-00043443.
88JP-00035809.
                                                                                                                                                                                                                                                                                                                                                         CHEM
virus; tom
e; disease
                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
418. .1074
/*tag= a
/label= cucumber mos
                                                                                                                                                                                                                                                                                                                                                                                                     88EP-00102322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                       virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 virus;
                                                                                                                                   ×
                                                                                                                                                                                                          306
                                                                                                                                                0.0112
69.00
100.00%
100.00%
100.00%
                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                   AAN81111
                                                                                                                                                                                                                                                                                  20pp; English.
                                                                                                                                                                                                                                                                                                                                                          UNI
                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 strain
                                                                                                                                                                                                                                                                                                esistant to cucumber mosaic v
                       RNA-3
                                                                                                                                                                                                          A;
                                                                                                                                                                                                                                                                                                                                          Komiya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plant
 tomato mosaic virus; minus-strand se resistance; transgenic plant;
                                                                                                                                                                                                                                                                                                                                                          CIL
                                                                         1696
                                                                                                                                                                                                          342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ĸ
                       chimera
                                                                                                                                                                                                         C;
                                                                          ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   viral
                                                                                                                                   (1-1379)
                                                                                                                                                                                                          333
                                                                                                                                                                                                                                                                                                                                                                                                                                                 mosaic
                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  resistance;
                                                                                                                                                                                                          <u>ი</u>
                       encoding
                                                                                                                                                                                                          398
                                                                                                                                                                                                                                                                                                                                                                                                                                                virus-Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                         구;
                       RNase
                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 coat
                                                                                                                                                1379
14
0
0
                                                                                                                                                                                                                                                                                                 virus
                        Ţ
                                                                                                                                                                                                                                                                                                       virus
                                                                                                                                                                                                          0
                                                                                                                     14
                                                                                                       459
                                                                                                                                                                                                                                                                                                                                                                                                                                                protein.
                                                                                                                                                                                                           Other;
                                                                                                                                                                                                                                                                                                s strain Y infection.
  cross
        RNA;
 protect
                                                                                                                                                                                                                                                                                                        used
  ion;
```

```
RESULT 13
AAQ76106
ID AAQ76
XX
AC AAQ76
XX
DT 25-MA
DT 20-JU
XX
Cucun
XX
KW Cucun
KW virus
KW virus
KW Lycos
KW ToMV
                                                                                                                                                                                                       Alignment Pred. No.: Score:
                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                       S
                                                                                                                               밁
                                                                                                                                                             US-09-
 hypersensitive Lycopersicon estromv; CMV; ss.
                                                                                                                                                                                                                                                     sense RNA that i invading virus, tobacco, tomato.
                                                                                                                                                                                                                                                                          A chimeric cucu
protein gene re
T1, having the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lycor
cell
                                                                                                                                                                                                                                                                                                                                                       P-PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
CDS
                                                                                                                                                                                                                                                                                                                       DNA constructs for imparting pathogen, encodes RNA that interacts with viral eliciting agent.
                                                                                                                                                                                                                                                                                                                                                                             De
                                                                                  AAQ76106
                                                                                                 AAQ76106
                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                          Cla
                                                                                                                                                                                                                                                                                                                                                                                           (SANO
(SANO
(SANO
                                                                                                                                                                                                                                                                                                                                                                                                                          04-JUN-
                                                                                                                                                                                                                                                                                                                                                                                                                                        03-JUN-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9429464-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cucumber
                        virus
                              Cucumber
                                              Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hypersensitive
                                                             25-MAR-:
                                                                                                                                                             857-
                                                                                                                                                                                                                                       equence
                                                                                                                                                                                                                                                                                                                                                      ; 199
SDB;
                                                                                                                                                                                                                                                                                                                                                                             Haan
                                                                                                                                                                                                                                                                                                          Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       opersicon esculentum;
l inhibitory protein;
                                                                                                                                                             841
                                                                                                                                                                                                                        S
                                                                                                                               733
                        res
                                                                                                                                                                                                                        core
                                                                                                                                                                                                                                                                                                                                                             .99
                                                            2003
                                                                                                                                                                                                                                                                                                                                                                                                                          1993
                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                           SANDOZ
SANDOZ-
SANDOZ-
                                                                                                                                                                                                                                                                                                                                                      5-036490/05
AAR67754.
                                                                                                                                                                                                                                                                                                                                                                             PT;
                                                                                                                                                            4
                                                                                                                                                                                                                                       1696
                                             mosaic
                              mosaic
                                                                                                                                                                                                                                                                                                         Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mosaic
                                                                                                 standard;
                                                                                                                              tomato.
                        istance;
                                                                                                                                                                                                                                                    cucumber mosaic virus RNA-3 (given in AAQ76107) has the sene replaced by a gene encoding a cell inhibitory protein, it the sequence given in AAR67754. The construct elicits a that interacts with the RNA-dependent RNA-polymerase of a virus, thus conferring virus-resistance on a host plant, e comato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                        Œ
                                                                                                                                                            1-
        esculentum;
                                                            (revised)
(first en
                                                                                                                                                                                                                                      вP;
                                                                                                                                                            14)
                                                                                                                                                                                                                                                                                                          31-
                                                                                                                                                                                                                                                                                                                                                                                           LTD.
PATENT GMBH.
-ERFINDUNGEN
                                                                                                                                                                                                                                                                                                                                                                                                                         93GB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       response
                                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-EP001817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/C
123. .437
/*tag= a
/product=
                               virus;
                                              virus RNA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          virus
                                                                                                                                                                                                                                                                                                         .32;
                        disease
                                                                                                                                                            ×
                                                                                                                                                                                                                                      387
                                                                                                                                                                         0.0142
69.00
100.00%
100.00%
100.00%
                                                                                                 DNA;
                                                                                                                                                            AAQ76107
                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                         00011593
                                                                                                                                                                                                                                                                                                        50pp;
                                                                                                                                                                                                                                      A;
                               tomato
                                                                                                 مبو
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /Quali
                                                                                                                                                                                                                                       413
        crop :
                                                                                                 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        crop improvement tobacco; Nicotia ToMV; CMV; 88.
       mato mosaic virus; minus-
resistance; transgenic p
crop improvement; tomato;
cobacco; Nicotiana tabacu;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "RNa
                                                                                                                                                                                                                                                                                                                                                                                             VERW
                                                                                                                                                                                                                                                                                                         English.
                                             chimera
                                                                                                  ВP
                                                                                                                                                                                                                                       Ç
                                                                                                                                                            (1-1696)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          fiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98
                                                                                                                                                                                                                                       389
                                                                                                                                                                                                                                                                                                                                                                                            GES
                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nicotiana
                                             encoding
                                                                                                                                                                                                                                      <u>ი</u>
                                                                                                                                                                                                                                                                                                                               RNA p
                                                                                                                                                                                                                                       ហ
                                                                                                                                                                                                                                       07
                                                                                                                                                                                                                                                                                                                               p. virus, 1
polymerase
                                                                                                                                                                                                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tomato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tabacum;
                                             TOMV
                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                       ₽;
                     s-strand
plant; c
                                                                                                                                                                           000044
                                              GP
CP
                                                                                                                                                                                                        .69
4.
                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                               resistance
e to genera
                                                                                                                               774
                                                                                                                                              14
                                                                                                                                                                                                                σ
         coat
                                                                                                                                                                                                                                       Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNase
                                                                                                                                                                                                                                                                                                                              stance to
generate
                        cross
                               RNA;
       prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T1;
                       protection;
                                                                                                                                                                                                                                                                                                                               plants
an
                                                                                                                                                                                                                                                             e.g.
                                                                                                                                                                                                                                                                           minus
                                                                                                                                                                                                                                                                                           coat
         O
                                                                                                                                                                                                                                                                                  RNase
```

```
Percent
Best Loc
Query Ma
 Alignment
Pred. No.:
                                                                                                                                                                                                                                        RE
                                                                                                                                              S
                                                                                                                                                              Sn
                                                                                                                                                                                                           Score:
                                                                                                          O7610
                                                                                                                                                             -09-
                                                                                                                                                                                                                                                      A chimeric
coat protei
(AAR67753).
RNA-depende
resistance
to correct
                                                                                                                                                                                                                                                                                                                         encodes RN eliciting
virus resistance; disease resistance; transgenic plant; cross hypersensitive response; crop improvement; tomato; Lycopersicon esculentum; tobacco; Nicotiana tabacum; P30: eliCMV; ss.
                                                                                                                                                                                                                                                                                                                                                       WPI; 1
P-PSDE
                                                                                                                                                                                   ent Similarity:
Local Similarity:
Match:
                                                                                                                                                                                                                                                                                                                                         DNA CO
                                                                                    AAQ76
                                                                                                   AAQ76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO942
                                                             25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                               De
                                                                                                                                                                                                                                                                                                                                                                                             (SANO
(SANO
(SANO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
CDS
                                               Cucum
                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                            04-JUN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                           03 - JUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cucum
                                                                                                                                                              857-
                                                                                                         14
)8
                                                                                                                                                                                                                                                                                                                                                                               Haan PT;
                                                                                                                                                                                                                  ••
                                                                                                                                                                                                                                                       rrect PN
                                                                                                                                 897
                                                                                                                                                                                                                                                             meric cucumber mosaic virus RNA-3 (given in AAQ76106) codes for the protein (CP) of tomato mosaic virus (AAR67752) as well as its own CP7753). The construct elicits minus-sense RNA that interacts with the ependent RNA-polymerase of an invading virus, thus conferring virus-tance on a host plant, e.g. tobacco, tomato. (Updated on 25-MAR-2003
                                                                                    108;
                                                                                                   108
                                                                                                                                                                                                                                                                                                                                 onstructs for imparting pathogen, es RNA that interacts with viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9464-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ber
                                               per mosaic
                                                                                                                                                              341-4
                                                                                                                                                                                                                                                                                                                                                                                                                                           V-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          C-1994.
                                                                                                                                                                                                                                                                                                           ω
••
                                                                                                                                                                                                                          cores:
                                                                                                                                                                                                                                                                                                                                                        995-036490/05; AAR67752, A
                                                                                                                                                                                                                                                                                                                                                                                             SANDOZ LTD.
SANDOZ PATENT GMBH.
SANDOZ-ERFINDUNGEN
                                                                                                                                                                                                                                         1860
                                                                                                                                                                                                                                                                                                           Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mosaic
                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                          agent.
                                                                                                                                                              (1-14)
                                                             (revised)
(first en
                                                                                                                                                                                                                                        B₽;
                                                                                                                                                                                                                                                       a host
field.)
                                                                                                                                                                                                                                                                                                           27-28;
                                                                                                                                                                                                                                                                                                                                                                                                     LTD.
PATENT GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product=
895. .1550
/*tag= h
                                                                                                                                                                                                                                                                                                                                                                                                                            93GB-00011593
                                                                                                                                                                                                                                                                                                                                                                                                                                           94WO-EP001817
                                               virus RNA-3 chimera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
123. .600
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'product=
                                                                                                                                                              ×
                                                                                                                                                                                                                                         448
                                                                                                                                                                                                                                                                                                                                                        AAR67753
                                                                                                                                                                            0.0158
69.00
100.00%
100.00%
100.00%
                                                                                                   DNA;
                                                              entry)
                                                                                                                                                             AAQ76106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .1550
                                                                                                                                                                                                                                                                                                           50pp; English.
                                                                                                                                                                                                                                         P
                                                                                                   2173
                                                                                                                                                                                                                                         429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "TOMV
                                                                                                                                                                                                                                                                                                                                                                                               VERW
                                                                                                   ВP
                                                                                                                                                                                                                                        <u>;</u>
                                                                                                                                                              (1-1860)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coat
                                                                                                                                                                                                                                                                                                                                                                                              GES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              coat
                                                                                                                                                                                                                                         431
                                                                                                                                                                          Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                               MBH.
                                                                                                                                                                                                                                        ູດ
                                              encoding ToMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein"
                                                                                                                                                                                                                                                                                                                                  , esp.
RNA p
                                                                                                                                                                                                                                         552
                                                                                                                                                                                                                                                                                                                                 polymerase to genera
                                                                                                                                                                                                                                        <del>,</del>
                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                        ς;
                                                                                                                                                                            1860
14
0
0
                                               P30.
                                                                                                                                                                                                                                         0
                                                                                                                                                14
                                                                                                                                                                                                                                         Other;
                                                                                                                                                                                                                                                                                                                                 stance to generate
                         cross
                        protection;
                                                                                                                                                                                                                                                                                                                                  plant:
                                                                                                                                                                                                                                                                                                                                          Ø
```

Control of the Contro

elicitor;

```
RESULT 15
AAQ03641
ID AAQ03
XX
AC AAQ03
XX
CUCUI
XX
CMV-(
XX
CMV-(
XX
PN WO90-(
XX
XX
PN WO90-(
XX
                                                                                                                                                                              Alignment Sco
Pred. No.:
Score:
Percent Simil
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                 9
                                                                                                                                                     გ
                                                                                                                                                                  -Sn
                                                                                                                                                                   -60
                                                                 24-OCT-2003
27-AUG-2003
25-MAR-2003
07-AUG-1990
                                                                                                                                                                                                                                                                                                       encodes RN eliciting
                                                                                                 AAQ03
                                                                                                              AAQ03
                                                                                                                                                                                                                                             A chimeric cucumber mosaic virus RNA-3 (given in AAQ76108) has the coaprotein gene replaced by a gene encoding an elicitor, ToMV P30, having the sequence given in AAR67755. The construct elicits a minus-sense RN that interacts with the RNA-dependent RNA-polymerase of an invading virus, thus conferring virus-resistance on a host plant, e.g. tobacco, tomato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                  P-
                                                                                                                                                                                                                                                                                                                                                                                                                                  WO94294
                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                     De
                                                                                                                                                                                                                                                                                                                                                                 (SANO)
                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                     22-DEC-1994
                           Cucumber
                                                    Cucumbe
                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                                                                                           04-JUN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumber
                                                                                                                                                                  857-
                                                                                                                                                                                                                                                                                                                                  PSDB
              9002185-
                                                                                                                                                                                                                                                                                                                                                     Haan
                                                                                                                                                                                                                                                                                                       constructs for codes RNA that in citing agent.
                                                                                                                                                                                                                                                                                                                                                                                                         JUN-
                                       Ü
                                                                                                                                        1210
                                                                                                  64
                                                                                                                                                                  841
                                                                                                               σ
                                                                                                                                                                                           milari
Simil
                                                                                                                                                                                                                                                                                           ហ
••
                                                                                                               41
                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                        9
                                       curcurbitaceae;
                                                    H
                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                 SANDOZ
SANDOZ
SANDOZ-
                                                                                                                                                                                                                                                                                                                                  )5-03
AAR6
                                                                                                                                                                                                                                                                                                                                                                                                        .994;
                                                                                                                                                                                                                     res
                                                                                                                                                                                                                                                                                                                                                     PT;
                                                                                                                                                                                                                                                                                                                                                                                                                                  4-A1
                                                                                                                                                                  4
                                                                                                                                                                                                                                  2173
                                                                                                                                                                                                                                                                                          Page
                           mos
                                                                                                                                       mosaic
                                                    Mosaic
                                                                                                              standard;
                                                                                                                                                                                            ġ (T
                                                                                                                                                                  (1-14)
                                                                                                                                                                                           y:
rity:
                                                                                                                                                                                                                                                                                                                                  64
                           g
                                                                 (revised)
(revised)
(revised)
(first ent
                           D.
C
                                                                                                                                                                                                                                 ₿₽;
                                                                                                                                                                                                                                                                                           34-35;
                                                                                                                                                                                                                                                                                                                                  90/05
                                                                                                                                                                                                                                                                                                                                                                 LTD.
PATENT GMBH.
-ERFINDUNGEN
                                                                                                                                                                                                                                                                                                                                                                                            93GB
                                                                                                                                                                                                                                                                                                                                                                                                         94WO-
                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifi
123. .914
/*tag= a
/product= "ToMV
                          virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virus
                                                                                                                                                                                                                                                                                                              or imparti
                                                                                                                                                                                                                                  561
                                                    877
                                                                                                                                                                 ×
                                                                                                                                                                              0.0189
69.00
100.00%
100.00%
100.00%
                                                                                                              DNA;
                                                                 entry)
                                                                                                                                                                  AAQ76108
                                                                                                                                                                                                                                                                                                                                                                                                         H
                                                                                                                                                                                                                                                                                                                                                                                            000115
                                                                                                                                                                                                                                                                                           50pp;
                                                                                                                                                                                                                                                                                                                                                                                                         P001817
                                                                                                                                                                                                                                  Α,
                                                    a
                          96
                                        solanaceae
                                                                                                               σ
                                                    (CMV-
                                                                                                                                                                                                                                  438
                           rain
                                                                                                               57
                                                                                                                                                                                                                                                                                                              ing p
                                                                                                                                                                                                                                                                                                                                                                                            93
                                                                                                                                                                                                                                                                                                                                                                  VERW
                                                                                                                                                                                                                                                                                           English.
                                                                                                              ВP
                                                                                                                                                                                                                                  Ω
                                                    G
                                                                                                                                                                  (1-2173)
                                                                                                                                                                                                                                                                                                              ch viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1e
                                                                                                                                                                                                                                                                                                                                                                  GES
                                                    coat
                                                                                                                                                                                                                                  532
                                                                                                                                                                                                                                                                                                                                                                                                                                               שי
                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                 Ω
••
                                                                                                                                                                                                                                                                                                                                                                  MBH
                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                               elicitor"
                                                   pro
                                                                                                                                                                                                                                                                                                              RNA po
                                                                                                                                                                                                                                  642
                                                    Œ
                                                                                                                                                                                                                                                                                                              polymerase to generate
                                                                                                                                                                                                                                 <del>;</del>
                                                   Ø
                                                    ene
                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                  u;
                                                                                                                                                                               0000HN
                                                                                                                                                                                                        173
                                                                                                                                                                                                                                  0
                                                                                                                                                     \vdash
                                                                                                                                         .
25
                                                                                                                                                                                                                                  Other;
                                                                                                                                                     Δ.
                                                                                                                                                                                                                                                                                                              stance to generate
                                                                                                                                                                                                                                                                  having
ense RNA
                                                                                                                                                                                                                                                                                                               plant:
                                                                                                                                                                                                                                                                              coat
                                                                                                                                                                                                                                                                                                                     \boldsymbol{\omega}
```

```
Percent Si
Best Local
Query Matc
DB:
                                                                      Alignment
Pred. No.:
Score:
                                                                                                    멍
             S
                             Sn
                             9
                                                                                                                 to cor
(Updat
standa
                                                                                                                                                                           Coat
                                                                                                                                                                                          WPI;
                                                                                                    S
                                                                                                                                        The
                                                                                                                                                      Discl
                                                                                                                                                                                                                      (UPJO
                                                                                                                                                                                                        Quemada H,
                                                                                                                                                                                                                                            19-AU
                                                                                                                                                                                                                                                                         08-MA
                                                                                                                                                                     rans
                                                                                                   equence
                             ហ
                                                                                                                                                                                                                                                          -AUG-1989;
                                                 Similarity:
al Similarity:
tch:
                                                                                                                                        \omega
                                                                                      Scores:
                                                                                                                  equence encodes the coat protein of CMV-C. (Updated on 25-MAR-2003 rrect PF field.) (Updated on 25-MAR-2003 to correct PA field.) ted on 27-AUG-2003 to correct OS field.) (Updated on 24-OCT-2003 to ardise OS field)
                                                                                                                                                      osure;
                                                                                                                                                                    protein gene of cucumber mosaic virus strain WL - cloned to formed plants which are resistant to CMV viral infection.
                                                                                                                                                                                          1990-099409/13.
                                                                                                                                                                                                                                            3-1988;
                                                                                                                                                                                                                                                                         R-1990.
                             41-4
             1
                                                                                                                                                                                                                             UPJOHN CO
                                                                                                                                                                                                                       CORNELL
657
                             (1-14)
                                                                                                                                                      Page ?; 18pp;
                                                                                                                                                                                                        Slightom JL,
                                                                                                   BP;
                                                                                                                                                                                                                                            88US-00234404.
                                                                                                                                                                                                                                                           89WO-US003288.
                                                                                                                                                                                                                       RES
                                                                                                    157
                             ×
                                          0.0379
64.00
92.86%
92.86%
92.75%
                            AAQ03641
                                                                                                                                                                                                                       FOUND INC.
                                                                                                    A;
                                                                                                    176
                                                                                                                                                      English.
                                                                                                                                                                                                        Gonsalves
                                                                                                    Ç
                             (1-657)
                                                                                                    151
                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                    <u>ი</u>
                                                                                                                                                                                                         'n
                                                                                                    173
                                                                                                                                                                                                         Kearney
                                                                                                    7
                                                                                                    0
                                                                                                    Ç;
                                                                                                                                                                                                         ü
                                           000000
                                                                                                    0
                                                                                                     Other;
                                                                                                                                                                            produce
```

Search Job tim pleted: De 329 secs December s, 2004, 08:24:35

ime

ct

 $\alpha$ 

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                             Minimum
Maximum
                                                                            Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run
                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                              Post
                                                                                                                                                                                                                                                                                                                                                                                                   Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring
                                                                                                                                                                                                                                                                                                                                                                                    Total
                                                                                                                                                                                                                                  Command line parameters:

-MODEL=frame+_p2n.model -DEV=xlh
-Q=/cgn2_1/USPTO_spool/US09857841/runat_03122004_160551_18593/app_query.far
-DB=EST -QFMT=fastap -SUFFIX=p2n.rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US09857841_@CGN_1_1_3437_@runat_03122004_160551_18593 -NCPU=6 -ICPU=:
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPO-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              on:
  166456789
                                                                                                                                                                                                                                                                                                                                             processing:
                                                                                                                  Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                     number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Œ
                                                                                                                                                                                                                                                                                                                                                             DB
BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BCOre
                                                                             S
                                                                             O
                                                                                                                    ۲.
8
                                                                                                                                                                                                                                                                                                                                                             60 60
                                                                                                                   greater t
s derived
                                                                                                                                                                                                                                                                                                                                                            jeq
  No.
                                                                                                                                                                                                                                                                                                                                                                                    of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic
                                                                                                                                                                                                                                                                                                                                                            length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                Xgapop
Ygapop
Fgapop
Delop
                                                                            Query
Match
                                                                                                                                                                                                                                                                                                                                                                                    hite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
SD
                                                                                                                                 8
                                                                                                                                                 9: 4: 3: 2: E
                                                                                                                                                                                                                                                                                                                             Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                BLOSUM6
  71.
71.
71.
71.
71.
69.
68.
                                                                                                                                                                                                                                                                                                                                                                                                   28228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ecemb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyright
                                                                                                                          the nu
                                                                                                                                              gb_est1: *
gb_est2: *
gb_est3: *
gb_est4: *
gb_est6: *
gb_gss2: *
   7 1 0 0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            search,
                                                                                                                   Λq
                                                                                                                                                                                                                                                                                                                                                                                    satis
                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                   75
                                                                                                                                  number
                                                                                                                                                                                                                                                                                                                                                                                                                  10.
6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57-
                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                 n or equal analysis c
                                                                                                                                                                                                                                                                                                                                                             000000000
                                                                                                                                                                                                                                                                                                                              Match
Match
first
                                                                                                                                                                                                                                                                                                                                                                                                  seqs
 127
4416
443
456
544
617
956
594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                   fying
                                                                                                                                                                                                                                                                                                                                                                                                                   0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           using
                                                                                                                                                                                                                                                                                                                                                                                                                 Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                 of
  426448971
                                                                                                                                                                                                                                                                                                                              0%
100%
45 gi
                                                                                                                                                                                                                                                                                                                                                                                                   18219865
                                                                                                                                                                                                                                                                                                                                                                                    chosen
                                                                                                                   results l to the of the t
BM067231
BE023342
CA800884
BI468772
BI971551
AQ737846
CC978898
CF568862
AL584972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                             ū
                                                                                                                                                                                                                                                                                                                               summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            frame
                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J
                                                                                                                                                                                                                                                                                                                                                                                   parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                   7 7 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : 23
                                                                                                                                                                                                                                                                                                                                                                                                                  0000
                                                                                                                    ct
                                                                                                                  predicted
score of t
total score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           snta
                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Search (without a 249.587 Mi
                                                                                                                                                                                                                                                                                                                                                                                                  residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            p2n
                                                                                                                   score
                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch time 2044
t alignments)
Million cell
                                                                                                                                 γď
                                                                                                                   by chance the result keresult keresult keresult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ltd
                                                                                                                                                                                                                                                                                                                                                                                    65645750
BM067231
BE023342
CA800884
BI468772
BI971551
AQ737846
CC978898
CF568862
AL584972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ents)
                                                                             Descripti
                                                                                                                   to hav being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ഗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              updates/
                                                                                                                                  have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              econd
                                                                                                                         printed,
KS08001E1
sm70f09.y
sat26b02.
sai03c10.
GM830013B
HS_2167_A
ZUAG628TH
FAMU_USDA
AL584972
                                                                             9
                                                                                                                                  þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ø
                                                                                                                                                                                                                                            FGAPOP=
                                                                                                                                                                                                                                                                                                 fasta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              eC
                                                                                                                                                                                                                                                                                                 ۳
```

Ω

 $\Omega$ 

Ω

00000000000

4 4 6 5																																		
4 4 4 4 4																																		
63.8 8	با ننا	نن د	w		نن	<b>.</b>	Ü	'n		ັນ •	<b>.</b>		Ġ	'n	ú	ហ	<b>5</b> 1	თ	9	5	9	9	9	О	σ.	<u>.</u>	•	9	0	9	<del>ن</del>	9	0	
471 476	<b>N</b> ⊢	9	0	μ	4	ø	N	φ	Ú	4	Q	~1	S	0	N	φ	σ	N	9	4	$\mathbf{\mu}$	μ	0	σ	U	0	0	J	S	4	9	Θ	æ	
<b>1</b> 8	<b>σ</b> -	٥ -	œ	<b>-</b>	N	4	9	œ	ហ	თ	9	7	σ	μ	φ	N	œ	4	ហ	ហ	Ŋ	ហ	տ	ហ	ഗ	φ	ഗ	ဖ	7	თ	ம	ຫ	۲	
AQ863793 AL369661	Q16476	W12744	Z04948	V16112	F51953	G40405	C69210	C40165	U27199	F25087	E05692	F88144	<b>B24192</b>	<b>193009</b>	C86075	W75242	Q77024	M54223	U13452	U32301	U22721	U25614	U26183	U36621	U10994	<b>E62975</b>	U34071	G54071	F57717	D35603	X25674	25674	L83620	) ) 
AQ863793 AL369661	Q16476	W12744	04948	V16112	F51953	G40405	C69210	C40165	U27199	F25087	E05692	F88144	B24192	I93009	C86075	W75242	Q77024	M54223	U13452	U32301	U22721	U25614	U26183	U36621	U10994	E62975	U34071	G54071	F57717	D35603	X25674	X25674	L83620	
nbeb0021P MtBA32E04	1062	110634	SSBru0	V16112	ST4569	024199	GWDU69	09 IMHD	038187	8a018_	igr-ga	ric027	I-CF-F	160e09	DL.107	C6-CT0	S_2260	GENCOU	031210	0340	033994	037459	035037	037890	031266	igr-ga	035191	anm sn	CSA209	GENCOU	X25674		L83620	) ) )

## ALIGNMENTS

DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM RESULT 1 BM067231/c LOCUS COMMENT FEATURES AUTHORS JOURNAL sourc C BM06723.

N KS08001E12 KSvo
N M8067231
N BM067231
N BM067231.1 GI:22787366
EST.
Capsicum annuum
Capsicum annuum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tri
Spermatophyta; Magnoliophyta; eudicotyledons; core eudi
asterids; lamiids; Solanales; Solanaceae; Capsicum.
1 (bases 1 to 127)
1 (bases 1 to 127)
1 (bases 1 to 127)
1 (c.-G. and Choi, D.
2 (c.-G. and Choi, D.
2 (c.-G. and Choi, D.
3 (c.-G. and Cho Lee,S., Kim,S.-I.,
Hur,C.-G. and Choi,D.
Generation of Expressed Sequence Ta
annuum L.) and Sequence Analysis in
Response Against Pathogen
Unpublished (2001)
Contact: Doil Choi
Genome Research Center and Nationa
Genome Research Institute of Bioscie Korea I P.O. Bo Tel: 82 Fax: 82 Email: High qu ea Research Institute of Bi
. Box 115, Yusong, Taejeon,
: 82-42-860-4340
: 82-42-860-4309
il: doil@mail.kribb.re.kr
h quality sequence stop: 12
Location/Qualifiers /organism="Capsicum an:
/mol\_type="mRNA"
/cultivar="Hang Keun"
/db\_xref="taxon:4072" Center and National Center for Genome Infinstitute of Bioscience and Biotechnology song, Taejeon, 305-600, Republic of Korea 127. annuum" Goh, S.-H., Pepper Pepper (Capsicum Hypersensitive a; Tracheophyta eudicots; EST Information Pai,H.-11-SEP-2002

团

a <del>Maria da</del> a antigar de la carectería 
ററ

```
Alignment
Pred. No.:
Score:
Score:
Percent Si
Best Local
Query Matc
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
BE023342/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              묎
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                        EATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local :
y Match
                                                                                                                                                                                                                                                                                                                                                                          sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity:
al Similarity:
                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
Other_ESTs: BI971551 corresponding to Contact: Shoemaker R/Public Soybean EST Project
Public Soybean EST Project
Washington University School of Medici 4444 Forest Park Parkway, Box 8501, St Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
When it has been determined, an EST for clone is listed in the 'Other ESTs on available through: Biogenetic Services 57006 USA (phone: 800 423 4163; email: Insert Length: 1035 Std Error: 0.00.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                              \mathbf{o}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae; Glycine.

1 (bases 1 to 416)

Shoemaker,R., Keim,P., Vodkin,L., Erpelding,J., Coryell,V., Khanna,A., Bolla,B., Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., Public Soybean EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="anther"
/dev_stage="10 weeks a
/clone_lib="KS08"
/note="Vector: pBluesc
                                                                                                                                                                                                                 /cultivar="Supernod"
/db_xref="taxon:3847"
/clone="GENOME SYSTEMS (
/tissue_type="roots of '
                                                                                           XhoI;
                                                                                                                                     /note="Vector:
'clone_lib="Gm-c1028"
'note="Vector: pBluescript II XR; Site_1: EcoRI; Site_2'
'Supernod' plants generously donated by Dr. Gary Stacey
'note="Vector: pBluescript II XR; Site_1: EcoRI; Site_2'
'Supernod' plants generously donated by Dr. Gary Stacey
                                                                                                                                                                                                                                                                                                                   organism="Glycine
mol_type="mRNA"
                                                                                                                                                         tissue_type="roots o
lab_host="DH10B"
clone_lib="Gm-c1028"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.00679
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM067231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pBluescript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                  max"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of Medicine x 8501, St. I
                                                                                                                                                                                                                                                                                                                                                                                                                        an EST from the other end of this : ESTs on clone' field. This clone is : Services, 801 32nd Ave. Brookings, SD : email: info@biogeneticservices.com)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   after
                                                                                                                                                                                                                 CLONE ID: Gm-c1028-
'Supernod' plants"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to Gm-r1083-
n EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SK(-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                germination"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SYSTEMS CLONE
TED IN SPLIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (3')
                                                                                    Stacey.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : GI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SD
```

```
Percent Similarity:
Best Local Similarity:
                                mRNA sequence.

M CA800884

CA800884.1 GI:26057970

EST.

Glycine soja

Glycine soja

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;

rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae;

Glycine.

1 (bases 1 to 443)

1 (bases 1 to 443)

1 (bases 1 to 443)

Shoemaker, R., Keim, P., Vodkin, L., Erpelding, J., Coryell, V.,

Khanna, A., Bolla, B., Marra, M., Hillier, L., Kucaba, T., Martin, J.,

Beck, C., Wylie, T., Underwood, K., Steptoe, M., Theising, B., Allen, M.,

Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N.,

Schurk, R., Watterston, R. and Wilson, R.

Public Soybean EST Project

Unpublished (1999)

Contact: Shoemaker R/Public Soybean EST Project

Washington University School of Medicine

4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA

Tel: 314 286 1810

Email: est@watson.wustl.edu

When it has been determined an EST from the other end of this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
 Email: est
When it ha
clone is l
available
                                                                                                                                                                                                                                                                                                                                                                                    Gm-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                      443
26b02.y1 Gm-c1056 Glycine
c1056-2379 5' similar to T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            with 5-methyl hemimethylate first-strand nucleotide (V
              has been de
listed in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.7
49.00
78.57%
64.29%
71.01%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BE023342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                n determined, a
in the 'Other
yh: Biogenetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-416)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                       3 bp mRNA linear EST 01-JUL-
e soja cDNA clone SOYBEAN CLONE ID:
TR:Q9XIR8 Q9XIR8 F13O11.6 PROTEIN.
                             an
 an EST from
ESTs on cl
Services,
  from the other ender on clone, field., clone, field., close, 801 32nd Ave
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  416
9
2
2
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
2
                             end
               This clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               was
   Brookings,
                         Of.
                            thi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              performed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in with
                                                                                                                                                                                                                                                                                                                                                                                                                   2004
                 18
    SD
```

Alignment Pred. No.:

No : :

ORIGIN

Score:

Query DB:

Mat

S C

US-09-857-

ACCESSION VERSION KEYWORDS SOURCE

SOURCE ORGANISM

REFERENCE AUTHORS

JOURNAL COMMENT

RESULT 3
CA800884/c
LOCUS
DEFINITION

멍

```
RESULT 4
BI468772/c
LOCUS
                                                                                   TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best I
Query
DB:
                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE
                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              85
                                                                                                                                                                                                                                                                                                                                                                                                                                                              7-841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores
                                                                                                                                                                                                                                                                                                                                                                                                               12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57006 USA (E
Seq primer:
High quality
                                                                                     Khanna, A., Bolla, B., Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C., Wylie, T., Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, R., Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, R., Waterston, R. and Wilson, R.

Public Soybean EST Project
Unpublished (1999)
Contact: Shoors
                     Fax:
                                                                                                                                                                                                                                                                                                                                 BI468772
sai03c10.y1 Gm-c1050
ID: Gm-c1050-4363 5'
                                             Contact: Shoemaker R/Public Soybean EST Public Soybean EST Project Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St.
                                                                                                                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae; Glycine.
                                                                                                                                                                                                                                                                                    EST
                                     Tel:
                                                                                                                                                                                                                                                           Glycine
                                                                                                                                                                                                                                                                       Glycine
                                                                                                                                                                                                                                                                                                 BI468772.1
                                                                                                                                                                                                                                                                                                            ;, mRNA sequence
BI468772
                                                                                                                                                                                                                                                                                                                                                                                                                                     μ
                                                                                                                                                                                                                                                                                                                                                                                                                                MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                              ATGGACAAAGCCGAATCTACCGGCTGTGGAAGAACGAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            quality
                      314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        max
                                                                                                                                                                                                                                                                         max
st@watson.wustl.edu has been determined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:3848"
/clone="SOYBEAN CLONE ID: Gm-cl
/tissue_type="Whole seedling, 4
/lab_host="DH10B"
/clone_lib="Gm-cl056"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 were trans
library was
Shoemaker.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host="DH10]
/clone_lib="Gm-/
/note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ity sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Glycine
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98.8
49.00
78.57%
64.29%
71.01%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -40RP
                                                                                                                                                                                                                                                                                                 GI:15284890
                                                                                                                                                                                                                                                                       (soybean)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     443
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CA800884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    008
                                                                                                                                                                                                                                                                                                                                   456
Glycine
similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-443)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      soja"
                                                                                                                                                                                                                                                                                                                                              bp
max
 an
                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                   mRNA linear EST 08-JUL-2004 cDNA clone GENOME SYSTEMS CLONE TR:Q9XIR8 Q9XIR8 F13O11.6 PROTEIN.
 EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gm-c1056-2379
ing, 4 day old
from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  info@biogeneticservices.com)
                                                 Louis,
                                                                                   Project
 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
4
2
2
4
3
4
4
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                               71
                                                                                                                                                                                                                                                                                                                                                                                                                                      14
 other
                                                 ð
                                                63108,
 end
 of.
                                                 USA
 this
```

Ş

US-

멍

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
BI971551
                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB :
                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                    COMMENT
                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ourc
                               Vodkin, L., Keim, P., Shoemaker, R., Retzel, E., Kl
Erpelding, J., Raph, C., Shoop, E., Pardinas, J., I
A Functional Genomics Program for Soybean (NSF
Unpublished (1999)
Other ESTs: BE023342 corresponding to Gm-c1028
Contact: Vodkin, L.O., PI, A Functional Genomic
Soybean (NSF 9872565)
                                                                                                                                                                           mRNA sequence.
BI971551
BI971551.1 GI:16:
EST.
Glycine max (soybe Glycine max
Eukaryota; Viridil Spermatophyta; Magrosids; eurosids Glycine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41-
Soybean (NS
Lewin, H. A
Genomics
University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone is listed in the 'Other ES available through: Biogenetic Se 57006 USA (phone: 800 423 4163; High quality sequence stop: 360.
                                                                                                                                                                                                                                                                                                                                              BI971551
GM830013B21D12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                   MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /lab_host="univo-
/clone_lib="Gm-c1050"
/clone_lib="Gm-c1050"
/note="Vector: pBluescript II SK+; Site_1: EcoRI; Site_2:
xhoI; The Clark NIL was constructed and seed was provided
by Dr. J. Specht, University of Nebraska (Shoemaker and
Specht, 1995). The cDNA library was constructed from mRNA
isolated from leaf tissue at various developmental stages
of 3 week old greenhouse grown plants. Complementary DNA
was synthesized from mRNA using a primer consisting of a
poly(dT) sequence with a XhoI restriction site and a 3'
anchor. EcoRI adapters were ligated to the blunt-ended
cDNA fragments followed by XhoI digestion. The cDNA
fragments were directionally cloned into the EcoRI-XhoI
restriction site of the pBluescript vector. The ligated
cDNA fragments were transformed into DH10B host cells
(GibcoBRL). The library was constructed in cooperation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/cultivar="Clark"
/db_xref="+~---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dev_stage="3 week old"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_
of green
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone="GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Glycine max"
                                                                                                                                                                                                                              Viridiplantae;
  0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                102
49.00
78.57%
64.29%
71.01%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lone="GENOME SYSTEMS CLA
lssue_type="leaf tissue
greenhouse grown plant;
                                                                                                                                                                                                                                                                                                 GI:16345956
                                                                                                                                                                                                                                                                (soybean)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BI468772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    xref="taxon:3847"
   Illinois
                                                                                                                                                                                               idiplantae; Streptophyta; Embryophyta; T
  Magnoliophyta; eudicotyledons; core eud
  I; Fabales; Fabaceae; Papilionoideae;
                                                                                                                                                                                                                                                                                                                                                544 bp
Gm-r1083 Glycine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    456)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMS CLONE tissue at plants"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ESTs on clone' field. This clone is Services, 801 32nd Ave. Brookings, SI; email: info@biogeneticservices.com)
                                                                                                                                                                                                                                                                                                                                                   max
                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                 CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ID: Gm-c
                                  Comparative
                                                                   Genomics
                                                                                                                                                                                                                                                                                                                                                   clone
                                                                                   c1028-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 0 3 2 9 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gm-c1050-4363"
lous developmental
                                                                                                                  (NSF
                                                                                                                                                                                                                                                                                                                                                  linear EST 23-OCT-
one Gm-r1083-4800 3'
                                                                                                                Khanna, A.,
, Liu, L. ar
SF 9872565)
                                                                                                                                                                                                                 phyta; Tracheophyta;
core eudicots;
                                                                                  .9282
                                                                 Program
                                  and
                                                                                                                                   and
                                                                                                                                                                                                    Phaseoleae
                                    Functiona
                                                                                                                                                Coryell
                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   stages
                                                                                                                                                                                                                                                                                                                                                                   2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gg
```

ARABARA CARLES ARABARA

Euteleostomi;

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                     RESULT 6
AQ737846/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                  Percent
ORGANISM
                                                                                                                                                                                                                                                                                                                               ent Similarity:
Local Similarity:
Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ource
                                                                                                                                                                                                                                                                                Θ
                                                                                                                                                                                                                                                                                                                                                                                                                       Scores
                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                41
                               sequence.
AQ737846
AQ737846.
GSS.
                                                                                                    HS 2167 A1 sapiens ger
                                                                                                                     AQ737846
HS_2167_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Edwin R. Madigan Building, 1201 W. Gregory Tel: (217) 244-6147

Fax: (217) 333-4582

Email: 1-vodkin@uiuc.edu

This clone is available through: Incyte General Conclest. Louis, Missouri 63134.

(314) 427-3222 FAX: (314) 427-3324. Web sinttp://www.incyte.com/reagents/catalog.jsj
Homo
                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seq primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n/index
                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                          (1-14)
sapiens
               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 / Cloud Tibe Summaria Comparative and stages of development of soybean. It represents 1117 sequences from the progenitor library Gm-c109 (from mature roots of 2 month old greenhouse grown 'williams' soybean plants); 820 sequences from the progenitor library Gm-c109 (from mature roots of 2 month old greenhouse grown 'williams' soybean plants); 820 sequences from the progenitor library Gm-c1013 (from 2 to 3 week old whole plants of williams); and 3055 sequences from library Gm-c1028 (from 'Supernod' plants whose seedlings were innoculated with Bradyrhizobium japonicum, courtesy of Dr. Gary Stacey). The 5' ESTS of the source clones from the different progenitor library Gm-r1083 used to select singletons, or a representative of each contig, which were reracked to form library Gm-r1083. The cDNA clones of the reracked Gm-r1083 library were then sequenced at the 3' end. The contig analysis to select unique genes was performed by the laboratory of Ernest Retzel, Center for Computational Genomics and Bioinformatics, University of Nttp://www.incyte.com, and 3' sequencing by the Keck Center for Comparative and Functional Genomics, St. Louis, http://www.lie.uiuc.edu/biotata/nsfsoy/.

Note: The corresponding 5' EST from each clone in the Gm-r1083 library is listed in the 'OTHER EST' field. The detailed information on the source library for each clone can also be obtained by referring to the Incyte Genomics clone in the original cDNA library that is also listed under 'OTHER EST'."
                                                                                                genomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="Gm-r1083-4800"
/clone_lib="Gm-r1083"
/note="The_library Gm-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      r: 5'-TTTTTTTTTTTTTTTTTT (A/C/G)-3'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Glycine ma
mol_type="mRNA"
db_xref="taxon:3847"
                                                                                                                     808
                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                            122
49.00
78.57%
64.29%
71.01%
                                                    GI:
                                                                                                 10 m
                                                                                                                                                                                                                                                                               BI971551
                                                                                                      Clone E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Building,
                                                                                                    617 bp
I Approved F
Plate=2167
                                                                                                                                                                                                                                                                               (1-5
                                                                                                                                                                                                                                                                            44)
                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /catalog.jsp?page=
                                                                                                   DNA linear GSS 16-JUL-1999
Human Genomic Sperm Library D Homo
7 Col=15 Row=C, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gregory,
                                                                                                                                                                                                                                                                                                                                                                    ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            site:
                                                                                                                                                                                                                                                                                                                 000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Urbana,
                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3, 4633
(800) '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clones/collaboratio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              430-0030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61801,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
MEDLINE
PUBMED
COMMENT
                                                 TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                RESULT 7
CC978898/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                        REFERENC
                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
```

Best I Query DB:

Score:

ORIGIN

-Sn

9

멍

SOURCE

```
Best Local
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CC978898

N ZUAG628TH ZM_3.0_4.0_KB Zea mays genomic clogenomic survey sequence.
CC978898
CC978898.1 GI:33838776
GSS.
Zea mays
Zea mays
Eukaryota; Viridiplantae; Streptophyta; Embres Spermatophyta; Magnoliophyta; Liliopsida; Pcclade; Panicoideae; Andropogoneae; Zea.

1 (bases 1 to 956)
This color of the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertek Mammalia; Eutheria; Primates; Catarrhini; Homi 1 (bases 1 to 617)

Mahairas, G.G., Wallace, J.C., Smith, K., Swartze Keller, A., Shaker, R., Furlong, J., Young, J., Zh Hood, L.

Sequence-tagged connectors: A sequence approace scanning the human genome proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-979380589

10449764

Contact: Mahairas GG, Wallace JC, Hood L High Throughput Sequencing Center University of Washington
Whitelaw, C.A., Quackenbush, J., Van Aken, S
Resnick, A., Fraser, C.M., Budiman, M.A., Be
Citek, R.W., Nunberg, A., Robbins, D. and La
Consortium for Maize Genomics
Unpublished (2002)
Other GSSs: ZUAG628TV
Contact: Cathy Whitelaw
TIGR
9712 Medical Center Drive, Rockville, MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BAC end Web Serv
Plate: 2167 row
Seq primer: T7
Class: BAC ends
High quality seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg :::|||::::|||||:::||| ATAGATCAAAATGAATCAAGCTCAAGCGGCCGTAATAAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        quality sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/clone="Plate=2167 Col=15 F
/sex="male"
/clone_lib="CIT Approved Hu
/note="Organ: sperm; Vector
E-Coli DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      210
48.00
100.00%
57.14%
69.57%
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AQ737846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-617)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T Approved Human sperm; Vector: pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      617.
                                                                                                                                                                         Van Aken,S., Utterback,T.,
n,M.A., Bedell,J.A., Rohlfing,T
s,D. and Lakey,N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Row=C"
       중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n Genomic Sperm pBeloBAC11; BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              approach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Swartzell,S.,
,J., Zhao,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9739-9744
                                                                                                                                                                                                                                                                                                                       Embryophyta; Tracheophyta; a; Poales; Poaceae; PACCAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear GSS 18-AUG-2003 clone ZMMBPa0057F07,
       20850,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (info@resgen.
       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to mapping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Holzmar
Adams,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Library
Clones i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Com)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
```

6 × 1/2 000

```
Alignment
Pred. No.:
Score:
Percent Si
                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
CF568862
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
ORIGIN
                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ent Similarity:
Local Similarity:
y Match:
                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 8
                                                                                                                                                                                                                                                                                                           Vitis shuttleworthii

M Vitis shuttleworthii

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tr

Spermatophyta; Magnoliophyta; eudicotyledons; core eudi

rosids; Vitaceae; Vitis.

1 (bases 1 to 594)

Hunter, W.B., Dang, P.M., Chaparro, J.X., Lu, J. and Leong,

canes expressed in Vitis shuttleworthii L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                  CF568862

FAMU USDA FP 00084 \
shuttleworthIi cDNA CF568862
CF568862.1 GI:3499
EST.

Vitis shuttleworthi Vitis shuttleworthi
                                                                                                                                                                                                         Contact: Jiang Lu, FAMU, Wa
Viticulture Centre, FAMU, Therida A&M University
Tallahassee, FL 32317, USA
Tel: (850) 412-7393
Fax: (850) 561-2617, (772)
Email: jiang.lu@famu.edu,
Seq primer: T3 Primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: 301-838-58
Fax: 301-838-02
Email: whitelaw
Seq primer: TR
Class: sheared
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301-838-5843
301-838-0208
.: whitelaw@tigr.org
       /organism="Vitis shuttleworthii"
/mol_type="mRNA"
/db_xref="taxon:246827"
/sex="Mixed population"
/tissue_type="Entire tendril, leaves, bud, flowers"
/tissue_type="Entire tendril, leaves, bud, flowers"
/tissue_type="Entire tendril, leaves, bud, flowers"
/dev_stage="At blooming"
/lab_host="XL1-Blue"
/clone_lib="Vitis shuttleworthii L., grape"
/note="Vector: pBluescript II SK+; Site_1: EcoRI; Site_2:
XhoI; A high quality EST with at least 100 contiguous
bases at Trace Tuner score of 20 or better. Construction
by PM Dang, USDA, ARS, U.S. Horticultural Research Lab,
Ft.Pierce, FL, USA."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Zea mays"
/mol_type="genomic DNA"
/strain="B73"
/db_xref="taxon:4577"
/clone="ZMMBPa0057F07"
/clone_lib="ZM_3.0_4.0_I
/note="Vector: pBCSK-; secondic DNA library"
                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             329
48.00
85.71%
57.14%
69.57%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:34994945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC978898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vitis
A 5', n
                                                                                                                                                                                                                                       (772)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-
                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                594 bp mRNA sequence.
                                                                                                                                                                                                                                                                                           Wayne Hunter,
, Tallahassee,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                        ₩.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA"
                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                         2-
                                                                                                                                                                                                                                                                                                        Hunter,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                            USDA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HincII;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 984500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              grape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST
Vitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                       eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'unfiltered'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-SEP-2003
```

```
Percent Sim.
Best Local (
                                                                                                                                    Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
AL584972/c
                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
RESULT 10
AL836204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignme
Pred. 1
                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -Sn
                                                  S
                                                                        -Sn
                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cent Similarity:
: Local Similarity:
cy Match:
                                                                                                                                                                                                                                                                                                                                        sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                               ••
                                                                                                                                                          Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AL584972
AL584972 Stratagene Chick Embryo
Gallus gallus cDNA clone ROS016G
AL584972
AL584972.1 GI:13163705
EST.
Gallus gallus (chicken)
Gallus gallus
Eukaryota; Metazoa; Chordata; Cr
Archosauria; Aves; Neognathae; G
Phasianinae; Gallus.
1 (bases 1 to 413)
                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                        Murray, F.

Stratagene Chick Embryo L
Stratagene Chick Embryo L
Unpublished (2001)

Contact: Frazer Murray
Dept. Genomics and Bioinf
Roslin Institute
Roslin, Midlothian, EH25
Tel: +44 (0)131 527 4200
Fax: +44 (0)131 440 0434
Email: frazer.murray@bbsr
Seq primer: T3.
                                267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                        (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-14)
                                                                                                                                                                                                                                                                                                                                                                       frazer.murray@bbsrc.ac
                                                                                                                                                                                                                                        /tissue_type="Embryo"
/dev_stage="5 days old"
/lab_host="SOLR cells (ki
/clone_lib="Stratagene Cl
937405)"
                                                                                                                                                                                                                                                                                  /organism="Gallus gall
/mol_type="mRNA"
/db_xref="taxon:9031"
/clone="ROS016G12"
/tissue_type="Embryo"
                                                                                                                                                                                                /note="Vector: pBLUESCRIPT SK; Site 1: EcoR1; Site 2: Xho1; Cloned unidirectionally. Primer: Oligo dT. Uni-XR vector. Average insert size: 1.5kb.; 5' adaptor sequence: 5' GAATTCGGCACGAG 3'; 3' adaptor sequence:
                                                                                                                                                                                       Location/Qualifie
                                                                       ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     306
47.00
100.00%
81.82%
68.12%
7
                                                                                          320
46.00
78.57%
64.29%
66.67%
                                                                                                                                                                                                                                                                                                                                      .413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CF568862
                                                                        AL584972
                                                                                                                                                                                                                                                                                                                                                                                                                           Bioinformat
                                                                                                                                                                                                                                                                                                                                                                               EH25
4200
0434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-594)
                                                                        (1-413)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lambda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       413 bp mRNA
k Embryo Lambda c
ROS016G12, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                     9PS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                          Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                            gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; V Galliforme
                                                                                                                                                                                                                                                                                                                                                                                                                          i
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA
                                                                                                                                                                                                                                                      (kanamycin re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       105
                                                                                                                           ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Libra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ive
8:
                                                                                                                                                                                           3
                                                                                                                 \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear E
cDNA Library
A sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata; Euteleostomi;
nes; Phasianidae;
                                                                                                                                                                                                                                                     resistant)"
Tyo Lambda c
                                                                                             4 6 6 6 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      226
                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-FEB-2001
937405)
                                                                                                                                                                                                                                                       Library
```

```
RESULT 11
BX256743/c
LOCUS
DEFINITION
                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                             us-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Locus
                                                                      ORGANIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                             09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ent Similarity:
Local Similarity:
y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No . :
                                                                                                                                                                                                                                                                                                                                                                                                             857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Takifugu rubripes (Fugu rubripes)

Eukaryota; Metazoa; Chordata; Craniata; Vertebr
Actinopterygii; Neopterygii; Teleostei; Euteleo
Acanthomorpha; Acanthopterygii; Percomorpha; Tetradontoidea; Tetraodontidae; Takifugu.

Clark, M.S., Edwards, Y.J., Petersona, Sugano, S.., Elgaro, Sigano, S.., Elgaro, El
BX256743 AGENAE Gallus gallus multi-
(gcag) Gallus gallus cDNA clone gcag
sequence.
BX256743
BX256743.2 GI:47581535
EST.
Gallus gallus (chicken)
Gallus gallus
Eukaryota; Metazoa; Chordata; Crania
Archosauria; Aves; Neognathae; Galli
Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MRC Human Genome Mapping Projectinxton, Cambridge, CB10 1SB, UEmail: biohelp@hgmp.mrc.ac.uk Email: biohelp@hgmp.mrc.ac.uk Vector: pBluescript II KS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fugu ESTs: new res
annotation
Genome Res. 13 (12
Contact: Clark MS
MRC Human Genome M
                                                                                                                                                                                                                                                                                                                           97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MRC Human (Cambridge,
Library sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         V type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AL836204
AL836204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The clone can be obtained from walbrary created by Greg Elgar MRC Human Genome Mapping Project Cambridge, CB10 1SB. UK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MRC Human Genome Mapping Cambridge, CB10 1SB. UK.
                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                        GATGGGAGCGAATCGAACAGCGCTGGACGTCGACGACGA
                                                                                                                                                                                                                                                                                                                                                 AspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human Genome Mapp
bridge, CB10 1SB.
rary sequenced by
                                                                                                                                                                                                                                                                                                                                                                                                           (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/db_xref="taxon:31033"
/clone="EFRd002apsA11"
/tissue_type="gut"
/clone_lib="EFRd"
/note="Vector: pBluescr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EFRd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Takifugu
                                                                                                                                                                                                                                                                                                                                                                                                          ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                   373
46.00
76.92*
76.92*
66.67*
                                                                                                                                                                                                                                                                                                                                                                                                          AL836204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Takifugu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (12),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sarah Warner
ping Project )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2747-275
                                                                                                                                                                                                                                                                                                                                                                                                          (1-480)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480 bp
rubripes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pBluescript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Project
1SB, UK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        081
                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       đq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rubripes"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            w
                            Craniata; Vertebrata; Euteleostomi Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    www.hgmp.mrc.ac.uk
                                                                                                                                                                                           mRNA 1
ulti-tissues
gcag0001c.c.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   r and Jim
Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Resource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Watabe, S., Kawakami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ટ્ટ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vertebrata; Euteleostomi;
Euteleostei; Neoteleostei
Cpha; Tetraodontiformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hills
Centre,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
10
0
3
                                                                                                                                                                                                                                                                                                                           43
                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Centre,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear EST 2
EFRd002apsA11,
                                                                                                                                                                                            normalized .05 Sprim, m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       analysis
                                                                                                                                                                                                                                     inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                            ST 24-MAY-2004
d library
mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Thompson, A.J., K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-FEB-2
1, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           200
```

```
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                 RESULT 12
BX256742/c
LOCUS
DEFINITION
                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
Pred. No.:
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                              US-09-
                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INRA, UMR INRA-ENSAR Genetique Animale 65, rue de Saint-Brieuc, RENNES cedex, 35042 Tel: +33 (0) 2.23.48.54.63 Fax: +33 (0) 2.23.48.54.70 Email: Madeleine.Douaire@roazhon.inra.fr Sequence cleaned of vector, adaptator and reat sigenasupport@jouy.inra.fr to obtain the sequence. Plate: 0001 row: c column: 5 Seq primer: M13R.
BX256742

BX256742 AGENAE Gallus gallus mu (gcag) Gallus gallus cDNA clone sequence.

BX256742

BX256742.2 GI:47581534

EST.

Gallus gallus (chicken)

Gallus gallus

Eukaryota; Metazoa; Chordata; Cr

Archosauria; Aves; Neognathae; G

Phasianinae; Gallus.

1 (bases 1 to 490)

Herault, F., Le Meuth-Metzinger, V

Klopp, C. and Douaire, M.

Construction and primary charact
                                                                                                                                                                                                                                                                                                                              41-4
                                                                                                                                                                                                                                                                                                                                                                                                                                           cores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Herault, F., Le Meuth-Merault, F., Le Meuth-Merault, F., Le Meuth-Merault, M.
Klopp, C. and Douaire, M.
Construction and primary charges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  multi-tissue cDNA libraries
Unpublished (2003)
On Feb 27, 2003 this sequence
Contact: Douaire M
                                                                                                                                                                                                                                                                       (base
                                                                                                                                                                                                                                                                                                                              (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oviduct, small follicle, ovary, hypothalamus, pituital gland, ileon, jejunum, caecum, duodenum, spleen, fabricius gland, bone marrow, thymus, hematopoietic progenitor cells. Clone distribution: AGENAE Resource centre. Francois PIUMI, Francois.Piumi.inra.fr, INRA, (Radiobiologie et Etude du genome (LREG), Domaine de Vilvert, 78352, Jouy-en-Josas cedex, FRANCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               r: M13R.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                                                                                                       378
46.00
78.57%
64.29%
66.67%
                              to 490)
Le Meuth-Metzinger, V.,
                                                                                                                                                                                                                                                                                                                             BX256743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  486
                                                                                                                                                                                   490 bp mRNA linear EST 24-MAY

AE Gallus gallus multi-tissues normalized library

gallus cDNA clone gcag0001c.c.05 3prim, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Meuth-Metzinger, V.,
                                                                                                                                                                                                                                                                                                                              (1-486)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           characterization
     characterization
                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                        Craniata; Ver
Galliformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desert, C.,
                                 Desert,
                                                                                                                                                                                                                                                                                                                                                                                                ive:
                                                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35042,
                                                                        Vertebrata; Eut
nes; Phasianidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d repetitions. Contact us the chromatogram of this
                               0.
      o
f
                                                                                                                                                                                                                                                                                                                                                         4
9
0
0
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
fi
      chicken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chicken
                                 Retout,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Retout, E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gi:
                                                                                       Euteleostomi;
                               [F]
       normalized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           normalized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pituitary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        normalized
                                                                                                                                                                                                                 24-MAY-2004
                                  Piumi, F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Piumi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ቹ
:
.
```

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                          Best I
Query
DB:
                                                                                                                                                                                                                                                               RESULT 13
CD356033
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                               US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                          COMMENT
                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                               857-841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Douaire M
INRA, UMR INRA-ENSAR Genetique Animale
65, rue de Saint-Brieuc, RENNES cedex, 3
Tel: +33 (0) 2.23.48.54.63
Fax: +33 (0) 2.23.48.54.70
Email: Madeleine.Douaire@roazhon.inra.fr
Sequence cleaned of vector, adaptator anat sigenasupport@jouy.inra.fr to obtain
Eukaryota; Metazoa; Chordata; Crar
Mammalia; Eutheria; Rodentia; Sciu
1 (bases 1 to 645)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Man
Unpublished (1999)
Contact: Daniela S. Gerhard, Ph.D.
Office of Cancer Genomics
National Cancer Institute / NIH
Bldg. 31 Rm10A07 Bethesda, MD 2089
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Michael Br
                                                                                                                                                                                                    CD356033
AGENCOURT 14292133 1
IMAGE:30379119 5', 1
CD356033
CD356033.1 GI:3112
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence.
Plate: 0(
                                                                                                                                                                                         Mus
                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seq primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished
                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Feb 27,
                                                                                                                                                                                          musculus
                                                                                                                                                                                                                                                                                                                                                                                               (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      issue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="gcag0001c.c.05"
/tissue_type="multi-tissues"
/dev_stage="from embryos to ac
/lab_host="DH10B"
/clone_lib="AGENAE Gallus gall
library (gcag)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Vector: pT7T3D-pac; tissues: brain, embryos, kidney, multi-tissues, muscle, pancreas, skin, testis, liver, adipose tissue, granulosa, utero-vaginal gland, oviduct, small follicle, ovary, hypothalamus, pituital gland, ileon, jejunum, caecum, duodenum, spleen, fabricius gland, bone marrow, thymus, hematopoietic progenitor cells. Clone distribution: AGENAE Resource centre. Francois PIUMI, Francois.Piumi.inra.fr, INRA, (Radiobiologie et Etude du genome (LREG), Domaine de Vilvert, 78352, Jouy-en-Josas cedex, FRANCE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                r: M13F.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Gallus gal
/mol_type="mRNA"
/db_xref="taxon:9031"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2003
                                                                                                                                                                                                                                                                                                                                                                                            ×
                                                                                                                                                                                                                                                                                                                                                                                                                          381
46.00
78.57%
64.29%
66.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     e cDNA
(2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .490
                                                                                                                                                                                                                     GI:31127444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             row:
                                                                                                                                                                                          (house
                                                                                                                                                                                                                                                                                                                                                                                               BX256742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (gcag) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                          645 bp
NIH_MGC_176 Mu
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       librarie
                                                                                                                                                                                         mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence
                                                                                                                                                                                                                                                                                                                                                                                               (1-490)
                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          version
                                                                                                                                              Craniata; Vertebrata; Sciurognathi; Muridae;
                                20892
                                                                                            /.
Mammalia
                                                                                                                                                                                                                                                              Mus
   Brownstein
                                                                          \Box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           obtain the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gallus multi-tissues
                                                                                                                                                                                                                                                                 musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                      an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35042,
                                                                                                     Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repetitions. Contact use chromatogram of this
                                                                                                                                                                                                                                                                                                                                                                                                                             40000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                      30
                                                                                                      Collec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gi:28579340
                                                                                                                                                                                                                                                                clone
                                                                                                      tion
                                                                                                                                               Euteleostomi;
Murinae; Mus
                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pituitary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    normalized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       testis,
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1
CF577171
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best I
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local S:
y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 857-
                                                                                                                                                   maturing stem of sugarcane l
sequence tags and gene expre
Unpublished (2003)
Contact: Rosanne E. Casu
Commonwealth Scientific and
Division of Plant Industry
Long Pocket Laboratories, 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores
                                                                                                                                                                                                                                                                                                                                                                                         CF577172
MCSA209G04 Maturing
Saccharum sp. cDNA of CF577172
CF577172.1 GI:35200
EST.
Saccharum sp.
Saccharum sp.
Saccharum sp.
Eukaryota; Viridipla
Spermatophyta; Magno
clade; Panicoideae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41-
Australia
Tel: 61 7 3:
Fax: 61 7 3:
Email: Rosa:
Bases 1-17
Seq primer:
High qualit:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC close found through the I.M.A.G.E. http://image.llnl.gov Plate: NDCM169 row: a columnish quality sequence stop:
                                                                                                                                                                                                                                                                                                     1 (bases 1 to 653)
Casu, R.E., Dimmock, C.M., Chapman,
Bonnett, G.D. and Manners, J.M.
Identification of differentially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA Library Preparation: Michael Brownstrum (LLN cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           primer: 1
h quality
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
              ol / 3214 2364
61 7 3214 2881
: Rosanne.Casu@csiro.au
1-17 (GTCGACCCACGCGTCCG):
rimer: T7 sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:30379119"

/clone_lib="NIH_MGC_176"

/clone="IMAGE:30379119"

/clone="IMAGE:30379119"

/clone="NIH_MGC_176"

/clone="IMAGE:30379119"

/clone="IMAGE:30379119"

/clone="IMAGE:30379119"

/clone="NIH_MGC_1:Sfil
/clone="IMAGE:Sfil
/clone="IMAGE:1:Sfil
/clone="IMAGE:1:Sfil
/clone="NIH_MGC_1:Sfil

                                                                                                                                                                                                                                                                                                                                                     sp.
; Viridiplantae; Streptophyta; Emury;
hyta; Magnoliophyta; Liliopsida; Poa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rry sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maturing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         505
46.00
78.57%
64.29%
66.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:35208498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _type="mRNA"
_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CD356033
   sequence
 sequencing prequence stop:
                                                                                                                                                                                                                                                               sugarcane by in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sugarcane Stem .
clone MCSA189F12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-645)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      column:
top: 258
                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculus"
                                                                                                                                                                                                                                                                                                                                                    Chapman, S.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        653
                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
     imer
655.
                                                                                                                                                                                                Industrial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp
e Stem
                                                                                                                                                        Meiers
                                             SalI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16
                                                                                                                                                                                                                                                                                    expressed transcripts silico analysis of ste
                                                                                                                                                                                                                                                              silico analysis profiling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lambda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                        Rd,
                                               adapter
                                                                                                                                                                                                   Research
                                                                                                                                                                                                                                                                                                                                                     Grof, C.P.L,
                                                                                                                                                                                                                                                                                                                                                                                                                  Embryophyta; Tracıı
•• Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                        Indooroopilly,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
ZIPLOX I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         αψαωοο
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                  Organisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Library
                                                                                                                                                                                                                                                                                                                                                       McIntyre,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TINL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST
                                                                                                                                                                                                                                                                                         scem
                                                                                                                                                                                                                                                                                                                                                                                                                         Tracheophyta
ceae; PACCAD
                                                                                                                                                                                                                                                                                                               from
                                                                                                                                                        Orp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-SEP-2003
(MCS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SfiI
                                                                                                                                                                                                                                                                                       expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 рe
                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       made
                                                                                                                                                          4068,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ሯ
```

ct

```
REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
AG540710/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment
Pred. No.:
                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  857-
                                                                             Hattori, M., Toyoda, A., Noguchi, H., Kojima, T. and Sakaki, Y.
BAC end Sequences of Library MSMg01

L Unpublished
E 2 (bases 1 to 677)
S Hattori, M., Toyoda, A., Noguchi, H., Kojima, T. and Sakaki, Y.
Direct Submission
L Submitted (17-NOV-2003) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.jp, URL:http://hgp.gsc.riken.go.jp/,
Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the mouse BAC library MSMg01. For BAC library availability, please contact Kuniya Abe (abe@rtc.riken.jp).
The Institute of Physical and Chemical Research (RIKEN) 3-1-1 Koyadai, Tsukuba, 305-0074 Japan phone: 81-298-36-9189, fax: 81-298-36-9199
e-mail: abe@rtc.riken.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                AG540710.1
GSS.
Mus musculu
                                                                                                                                                                                                                                                                                                                                                                                    Mus musculv
Eukaryota;
Mammalia; E
Vector
R.Site
R.Site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AG540710
Mus muscu
                                              Sequencing LIBRARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \mathbf{P}
                                                                            PRIMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                   musculus molossir
s musculus molossir
karyota; Metazoa; (
mmalia; Eutheria; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-14)
 \Sigma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Saccharum sp
/mol_type="mRNA"
/cultivar="Q117"
/db_xref="taxon:15819"
/clone="MCSA189F12"
/dev_stage="12 months p
/lab_host="Y1090(ZL)"
/clone_lib="Maturing Su
(MCS)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Organ: internodes 6-11; Vector: Lambda ZIPLOX; Site_1: SalI; Site_2: NotI; mRNA was prepared from internodes 6-11 of the sugarcane variety Q117. cDNA was synthesised from a NotI-oligodT primer/adapter using the manufacturers protocols (Life Technologies) and then ligated to a SalI adapter to facilitate directional cloning. The cDNA was cloned into the SalI and NotI sites of the Lambda ZIPLOX phage vector (Life Technologies). Constructed by Rosanne E. Casu."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
1. .653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               511
46.00
85.71%
64.29%
66.67%
                                                                                                                                                                                                                                                                                                                                                                                   molossinus
molossinus
Metazoa; Chordata;
htheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:48301124
pBACe3.6
EcoRI
EcoRI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             molossinus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CF577172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            677
DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp DNA clone:MSMg01-
                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; I
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sugarcane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 вp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       post-planting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear (
-453M10.TJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lambda
                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIPLOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3SS 05-JUN-2004
genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Library
                                                                                                                                                                                                                                                             Physical
                                                                                                                                                                                                                                 Japan
```

```
Percent
Best Loc
Query Ma
                                                                                                                 Alignment s
Pred. No.:
Score:
Sea:
Job
                                 밁
                                               Ş
                                                                  SD
                                                                                  BB
                                                                                                                                                    ORIGIN
                                                                  09-
       rch
time
                                                                                      ent Similarity:
Local Similarity:
Y Match:
                                                                                                                                                                                                                             sourc
                                                                  857-
       COM
pleted: Dec
2049 secs
                                 284
                                                                  41-
                                                                                                                                   cores:
                                                μ
                               4
                                                                  (1-14)
        December
                                                                                                                                                       /organism="Mus musculus molossinus"
/mol_type="genomic DNA"
/sub_species="molossinus"
/db_xref="taxon:57486"
/clone="MSMg01-453M10.TJ"
/sex="male"
/tissue_type="mixture of kidney and spleen"
/clone_lib="MSMg01 Mouse Male BAC Library"
                                                                                                                                                                                                                           Location/Qualifiers
                                                                 ×
                                                                                530
46.00
71.43%
64.29%
66.67%
9
                                                                 AG540710
        U
        2004,
                                                                  (1-677)
        09:41:17
                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                 677
9
1
1
0
                                  243
                                                14
```

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run
                                                                                                                                                                                                                                                     Database
                                                                                                                            Result
                                                                                                                                                                                                                                                                   Command line parameters:
-MODEL=frame+_p2n.model -DEV=xlh
-Q=/cgn2_1/USPTO_spool/US09857841/runat_03122004_160552_18608/app_query.fasta_
-DB=Issued_Patents_NA -QFMT=fastap -SUFFIX=p2n.rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US09857841_@CGN_1 1_69_@runat_03122004_160552_18608 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=(
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               earched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
  121
121
121
121
121
121
121
                                                                                                                                                             Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                             number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \mathbf{o}
                                                                                                                                                                                                                                                                                                                                                                                                                   DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           score:
                                                                                                                                                              <del>1</del>8
                                                                                                                                                                                                                                                                                                                                                                                                                 seq
                                                                                                                                                             No. is th greater to derived
  of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
Xgapop 1
Ygapop 1
Fgapop
Delop
                                                                                                                                                                                                Issued
1: /cg
2: /cg
3: /cg
4: /cg
6: /cg
                                                                                                                Query
Match
 100.0
100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                             hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-1
                                                                                                                                                                                                                                                                                                                                                                               Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                               Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                               24507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ecemb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyright
                                                                                                                                                                     the nur
                                                                                                                                                                                              ed_Patents_NA:*
/cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          search,
                                                                                                                                                                                                                                                                                                                                                                                                                                            satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        er
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     857-841-
                                                                                                                   Lengt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.0
6.0
6.0
                                                                                                                                                                               number
                                                                                                                                                                                                                                                                                                                                                                                                                   0
2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ведв,
                                                                                                                                                            n or equal analysis c
                                                                                                                                                                                                                                                                                                                                                                               Match
Match
first
  130
130
130
130
130
130
130
130
130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2004,
                                                                                                                                                                              O.F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xgapext
Ygapext
Fgapext
Delext
   55394441
                                                                                                                                                                                                                                                                                                                                                                               0%
100%
45 si
US-08-090-193-14
US-08-488-031-14
US-08-486-569-14
US-08-488-027-14
US-08-482-663-14
US-08-482-658-14
US-08-482-658-14
US-08-470-349-14
US-08-475-610-14
PCT-US92-00277-14
PCT-US92-00278-14
US-08-090-193-11
                                                                                                                                                                                                                                                                                                                                                                                                                                             chosen
                                                                                                                                                       of to
                                                                                                                                                             results 1 to the of the t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                summarie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08:19:02
                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                               re
                                                                                                                                                                                                                                                                                                                                                                                                                                            parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7700
                                                                                                                                                             predicted by chance
score of the result
total score distribut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         snld
                                                                                                                                                                                                                                                                                                                                                                                                                                                               sidue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 ; Search
(without a
148.523 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cch time 67 Sec
ut alignments)
Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                            1649014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67
                                                                                                                  Descrip
 Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                              to hav being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seconds
                                                                                                  equenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      updates/sec
                                                                                                                                                                               have
                                                                                                                   Ţ
                                                                                                                                                                      printed
                                                                                                  \mathbf{o}
                                                                                                                   9
 .199
```

	44																															
	69																															
00.	100.0	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.
ហ	153	Ü	່ເກ	ហ	ហ	Ġ	ហ	ū	ū	Ü	S	່ເກ	S	S	ū	σ	υī	S	ū	G	G	G	w	w	w	w	w	w	w	w	ω	Ü
٦	u	ហ	ហ	ഗ	W	ω	w	ω	ω	w	N	N	N	N	N	N	N	N	N	N	۲	μ	u	ហ	w	w	w	N	N	Ŋ	Ŋ	N
S-08-090-193-1	-US92-00278-1	CT-US92-00278-	CT-US92-00277-1	CT-US92-00277-	S-08-475-610-1	S-08-475-610-	S-08-470-349-	S-08-470-349-	S-08-482-658-	S-08-482-658-	S-08-482-663-	S-08-482-663-	S-08-090-192-	S-08-090-192-	S-08-488-027-	S-08-488-027-	S-08-486-569-	S-08-486-569-	S-08-488-031-	S-08-488-031-	S-08-090-193-	S-08-090-193-	CT-US92-00278-1	CT-US92-00277-	S-08-475-610-1	S-08-470-349-1	S-08-482-658-1	S-08-482-663-1	S-08-090-192-1	08-488-027-1	S-08-486-569-	8-488-031-1
Sequence 12, Appl	equence 12,	ce 10, Ap	ence 10,	equence 9, A	ce 10,	ence 9, A	Sequence 10, Appl	e 9, A	e 10, Ap	ence 9, A	equence 10,	equence 9, A	equence 10, App	, Appl	equence 10, App	equence 9, Appl	ce 10, App	equence 9, Appl	equence 10, App	equence 9, Appl	ce 10, Ap	ence 9, Appl	nce 11, App	equence 11, App	ence 11,	equence 11, A	ence 11, Ap	ence 11, App	ence 11, App	nce 11, A	ce 11, A	Sequence 11, Appl

## ALIGNMENTS

```
RESULT 1

US-08-090-193-14

(US-08-090-193-14

(US-08-090-193-14

(Sequence 14, Application US/08090193

(Patent No. 5641673)

(Pate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goldstein &
, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Using Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ribozymes
```

```
Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid; STRANDEDNESS: both; TOPOLOGY: both
US-08-090-193-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 2
US-08-488-031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
                    APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.308000;
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      core:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1
Patent No.
GENERAL I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATIC
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Cell Ablation Using TINMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein & STREET: 1100 New York Avenue, N.W., Suit CITY: Washington STATE: D.C.
COUNTRY: U.S.A
                                                                                                                                                                                                                                         ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: PatentIn Release #1.0, Ve

COMPUTER: PatentIn Release #1.0, Ve

COMPUTER: US/08/488,031

FILING DATE: 07-JUN-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/090,193

FILING DATE: 23-DEC-1993

PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ent Similarity:
Local Similarit
Y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 857-841
LENGTH:
TYPE: T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , Application 5849548
nucleic
EDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ty:
      acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.00013
69.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-090-193-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08488031
                                                                                                                35,086
R: 0609.3080002/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0609.3080001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservativ
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ribozymes
```

```
Query Match
DB:
                                                     Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
US-08-486-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
            Percent Similarity:
Best Local Similarity:
                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-488-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
                                                                                                               COUNTRY: U.S.A.

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Vers
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/486,569
FILING DATE: 07-JUN-1995
PRIOR APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,330
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3080006
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Patent No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Number CORRESPONDE STREST: Street: 1100 New STREET: 1100 New CITY: Washington STATE: D.C.
COUNTRY: U.S.A.
TIP: 20005
TIP: 20005
TIP: TRADABLE F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
TITLE OF IN
NUMBER OF SI
                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                 -486
                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LICANT: Haseloff, James
LICANT: Brand, Andrea
LICANT: Perrimon, No. 5863774bert
LICANT: Goodman, Howard M.
LE OF INVENTION: Cell Ablation Usin
BER OF SEQUENCES: 56
RESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : YDOJIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        031-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53
                                                                      cores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1, Application US/08486569
5863774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEE: Sterne, Kessler, G
1100 New York Avenue,
Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-14)
                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
0.00013
69.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.00013
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-488-031-14 (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ablation Using Trans-Splicing Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                                                      3080006/MAC/LBB
 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130
0
0
0
  130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14
```

```
Alignment
Pred. No.:
Score:
Percent Si
                                                                             Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
US-08-
                  9
                                     S
                                                           us-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB:
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Patent No
GENERAL
                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/488,027

FILING DATE: 07-JUN-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/090,193

FILING DATE: 23-DEC-1993

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/00277

FILING DATE: 16-JAN-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/642,330

FILING DATE: 17-JAN-1991

ATTORNEY/AGENT INFORMATION:

NAME: DECERTOR R
                                                            09
                                                                                                                                                             -80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ULT 4
08-488-027-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-
                                                                                                                                                                                                            TELEFAX: (202) 371-254 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                              NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 060
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
TELEFAX: (202) 371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Ce
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                               No::
                                                           857-
                                                                                        Match:
                                                                                                                                                             488-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  857-
                                                                                                                                                                               TYPE: nucleic a STRANDEDNESS: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
CITY: Wa
STATE: I
COUNTRY:
ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                       TOPOLOGY:
                                                                                                Similarity:
al Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.
                                                                                                                                         Scores
                                                           8
                                                                                                                                                             027-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          53
                  w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ,,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application 5866384
                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D.C
                                                                                                                                                                                                    130 base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1100 New York
                                                          (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brand, And
Perrimon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goodman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Release
                                                                                                                                                                       linear
                                                                                                                                                                              ase pairs
; acid
both
                                                                                                                                                                                                                                                                                                                                                                                                                                      PC compatible M: PC-DOS/MS
                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                            0.00013
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -Sn
                                                          US-08-488-027-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Howard M.
Cell Ablation Using
56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kessler, Goork Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08488027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-486-569-14
                                                                                                                                                                                                                                                                     35,086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5866384bert
                                                                                                                                                                                                                                                               0609.
                                                                                                                                                                                                                                                                                                                                                                                                                           #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                            #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goldstein & F
                                                                                                                                                                                                                                                               3080003/MAC/LBB
                                                                                     Length:
Matches:
Conservativ
Mismatches:
Indels:
                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              Version
                                                         (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FOX
:e 600
                                                                                                          ive
                                                                                                                                                                                                                                                                                                                                                                                                                              130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                  94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
                                      14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ribozymes
```

```
US-08-090-1; Sequence; Patent No
                                                                                                                             RESULT 6
US-08-482-663
; Sequence 14
; Patent No.
                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                 Alignment
Pred. No.:
                                                                                                                                                                                                                                                                       Query
DB:
                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                           SD
                                                                                                                                                                                                                                              US-09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Haseloff, James
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Trans-Splicing
NUMBER OF SEQUENCES: 51
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Golds
STREET: 1100 New York Avenue, Sui
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1 ^.
                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL
                                                                                                                    GENERAL
                                                                                                                                                                                                                                                                                                                                                                         -090-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 11-NOV-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/ UFILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
FILING DATE: 17-JAN-1991
TITLE OF INVENTION: Cel
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kei
STREET: 1100 New York
                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                      APPLICANT:
TITLE OF IN
                                                                                                                                                                                                                                                                                                                                 No : :
                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic a STRANDEDNESS: 1 TOPOLOGY: both 090-192-14
                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                14, Application of 5882907
                                                                                                                                                                                                                                              841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14, APT 14.0. 5874414
                                                                                                                                                                                              S
                                                                                                                                                                                                                     Η
                                                                                                                                                                                             Application
    : Sterne, Kessler, G
                                                           Haseloff, Jame
Brand, Andrea
Perrimon, No.
Goodman, Howar
                                                                                                                                                                                                                                              (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                      both
                                                                                                                                                                                                                                                                                                                                                                                                base pairs
ic acid
: both
                                                                                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                    0.00013
69.00
100.00%
100.00%
100.00%
                                        Howard M.
Cell Ablation
56
                                                                                                                                                                                                                                              US-08-090-192-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Howard M.
Trans-Splicing F
                                                                               No. 5882907bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08090192
                                                                                                                                             US/08482663
                                                                                                       James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/090,192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07/642,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0609.3030001
    Goldstein & Foe, N.W., Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goldstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suite
                                                                                                                                                                                                                                                                                  Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                    Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Version #1.25
                                                                                                                                                                                                                                              (1-130)
                                                                                                                                                                                                                                                                       Ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000 &
E
                                                      Trans-
   Fox
:e 600
                                                     Splicing
                                                                                                                                                                                                                                                                         130
0
0
0
                                                                                                                                                                                                                       14
                                                       Ribozyme
```

 $\phi = -i \hbar_{\alpha} i \frac{d}{d\alpha} =$ 

Washington D.C.

```
RESULT 7
US-08-482-658-14
; Sequence 14, Application U
; Patent No. 6010904
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                          us-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/482,663
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
                                                                    APPLICANT: Perrimon, No APPLICANT: Goodman, How TITLE OF INVENTION: Cell NUMBER OF SEQUENCES: 56 CORRESPONDENCE ADDRESSE: Sterne, Kerstreet: 1100 New York CITY: Washington STATE: D.C. COUNTRY: U.S.A. ZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Washingtor STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE F
MEDIUM TYPE: Flc
COMPUTER: IBM PC
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.
                                                                                                                                                                                                                                                                                                                                                                                                         857-841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482-663-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 130 bar
TYPE: nucleic a
STRANDEDNESS: 1
TOPOLOGY: linea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores
                                                                                                                                                                                                                                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                                              μ
                                                                                                                                                                                                                                                                                                                                                 Haseloff, James
Brand, Andrea
Perrimon, No. 60
Goodman, Howard I
TVENTION: Cell Ab
SEQUENCES: 56
                                                                                                                                 : Sterne, Ker
1100 New York
                                                                                                                                                                                                                                                                                                                                                                                                         (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                base pairs ic acid : both
                                                                                                                                                                                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                                                                                                                                                                                                                    0.00013
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                          US-08-482-663-14
                                                                                                                                                                                                                      No. 6010904bert
                                                                                                                                             Kessler,
                                                                                                                                                                                                                                                                                            US/084826
                                                                                                                                 Avenue,
                                                                                                                                                                                           Ablation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6090
                                                                                                                                 Goldstein & Fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3080005/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                       Using
  Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Version
                                                                                                                                                                                                                                                                                                                                                                                                          (1-130)
                                                                                                                                                                                       Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #1.
    #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                      0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                          Ribozyme
```

```
RESULT 8
US-08-470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment & Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best I
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-482-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 14
Patent No.
GENERAL IN
APPLICAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: US/08/470,349
FILING DATE: 06-JUN-1995
CLASSIFICATION NUMBER: 08/090,192
FILING DATE: 11-NOV-1993
APPLICATION NUMBER: PCT/ US 92/002
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ent Similarity:
Local Similarity:
Y Match:
                                                                                                                                                                                                                                                              APPLICANT: G
TITLE OF INVE
NUMBER OF SEQ
CORRESPONDENC
ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APP
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DATE: 23-DEC-1993

OR APPLICATION DATA:

PLICATION NUMBER: PCT/US

LING DATE: 16-TT.
                                                                                                                                                                                                                                                                                                                                    ICANT: Goodman, How Goodman, How B OF INVENTION: Tracer of SEQUENCES: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                                                  CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NT APPLICATION DATA:
LICATION NUMBER: US/08/482,658
ING DATE: 07-JUN-1995
APPLICATION DATA:
LICATION NUMBER: 08/090,193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                658-14
                                                                                                                                                                                                                                                                                                                                                                                                                                            14,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      53
                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                RY: U.S.A.
20005
                                                                                                                                                                                                                                                                                                                                                                                                                            4, Application US/08470349 6015794
                                                                                                                                                                                                                                                                                             Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D.C.
                                                                                                                                                                                                                                                                                                            : Sterne, Kessler, G
1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.00013
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                   , Howard M.
Trans-Splicing Ribozymes: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-482-658-14 (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PCT/US92/00277
                                                                                                                                          US/08/470,349
           07/642,333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0609.3080008/MAC/LBB
                                                                                                                                                                                                                                                                                                            Goldstein &
e, Suite 600
                                                     92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                          Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130
14
0
0
```

SEQUE

```
RESULT 9
US-08-475-61
; Sequence 1;
; Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Su-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                             SOFTWARE: Patentin Release #1.0, Veri
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/475,610
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-475-610-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
TELEFAX: INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-857-841-
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
TITLE OF IN
                     NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 06
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                NUMBER
                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -470-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.
                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Sterne
STREET: 1100 New
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 130 bar
TYPE: nucleic a
STRANDEDNESS: 1
TOPOLOGY: both
470-349-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                         COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53
                                                                                                                                                                                                                                                                                                                                                                                              OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application 6071730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                D.C.
                                                                                                                                                                                                                                                                                                                                                           : Sterne, Ker
1100 New York
                                                                                                                                                                                                                                                                                                                                                                                                                 Goodman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-14)
 (202)
R SEQ
                                                                                                                                                                                                                                                                                                                      U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                Perrimon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                               Brand, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   poth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             base pairs
ic acid
: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
                                                                                                                                                                                                                                                       Floppy disk
1 PC compatible
1EM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-JAN-1991
 371-
ID N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.00013
69.00
100.00%
100.00%
100.00%
         371-2600
171-2540
                                                                                                                                                                                                                                                                                                                                                                                            Howard Cell Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-470-349-14
                                                                                                                                                                                                                                                                                                                                                                                                                                    No.
                                                                                                                                                                                                                                                                                                                                                                      Kessler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08475610
                                                       35,086
                                                                                                                                                                                                                                                                                                                                                           Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                   6071730bert
                                                                                                                                                                                                                                                                                                                                                                                                            Ablation
                                               6090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0609.3030001
                                                                                                                                                                                                                                                                                                                                                          Goldstein & Po
                                                .3080004/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                         Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                         Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                        Fox
te 600
                                                                                                                                                                                                                                              #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                                                                                           Ribozymes
```

```
RESULT 10
PCT-US92-(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Sim
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Pred. No.:
  Query
DB:
                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                     Pred.
                                                                Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-475-
                                                                                                                                              FILING DATE: 19920116
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Goldstein, Jorge A
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)833-8716
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
GENERAL
                                                                                   STRANDEDNESS: bot:
TOPOLOGY: linear
MOLECULE TYPE: DNA
'-US92-00277-14
                                                                                                                                                                                                                                                                                                 ZIP: 20036

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, V

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLI(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid STRANDEDNESS: both TOPOLOGY: line.
           Local
Matcl
                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matc
                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSI
STREET:
CITY: V
STATE:
                                                                                                                               TYP
                                                                                                                                          LEN
                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                     ICANT: Haseloff, James
ICANT: Goodman, Howard
ICANT: Brand, Andrea
ICANT: Perrimon, Norbe
ES OF INVENTION: Cell I
ES PONDENCE ADDRESS:

Vaccination
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  imilarity:
l Similarity:
ch:
                                                                                                                                                                                                                                                                                                                                                                                       NTRY:
                                                                                                                                         GIH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scores
                                                                  Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                  RESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0277-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            610-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14, Application PC/TUS9200277 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                            Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                   DC
                                                                                                                                         130 bases
                                                                                                                                                                                                                                                                                                                                                                                                                      1225 Connecticut Avenue, N.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MATION.
Haseloff, James
---man. Howard M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-14)
                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                    both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
 0.00013
69.00
100.00%
100.00%
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.00013
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-475-610-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Norbert
Cell Ablation Using
                                                                                                                                                                                                                                                                                                     PCT/US92/00277
                                                                                                                                                                                                 29,021
R: 0609.3496604
                                                                                                                                                                                                                                                          07/642,
                                                                                                                                                                                                                                                           330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                          Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                 gr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Trans-
                                                                                                                                                                                                                                                                                                                                                                                                                      k Fox
Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                        300
 000013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ribozym
```

Alexander Marie Alexander 
**B**n

Ribozymes

```
RESULT 12
US-08-090-193-11
; Sequence 11, Application; Patent No. 5641673
; GENERAL INFORMATION:
; APPLICANT: Haseloff; APPLICANT: Brand, I APPLICANT: Perrimon; APPLICANT: Goodman,
                                                                                                                                                                                                                                                    Alignment Pred. No.: Score:
                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00278
FILING DATE: 19920116
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,333
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Goldstein, Jorge A
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0609.347(
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)833-7533
TELEFAX: (202)833-7533
TELEFAX: (202)833-7533
TELEFAX: (202)833-8716
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 bases
TYPE: NUCLEIC ACID
STRANDEDNESS: Single
TOPOLOGY: Linear
MOTECULE TYPE: Nucleic Acid
                                                                                                                                                   S
                                                                                                                                                                             -Sn
                                                                                                                                                                                                     Query
DB:
                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
PCT-US92-00278-14
; Sequence 14, Application
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -SD
                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Goodman, HOTITLE OF INVENTION: Tr
NUMBER OF SEQUENCES: S
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                            857-
                                                                                                                                                                                                                                                                 No : :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Sterne, Kessler, Golds
STREET: 1225 Connecticut Avenue,
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20036
                                                                                                                                                                           841-4
                                                                                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841 - 4
                                                                                                                             53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53
                                                                                                                                                   μ
                                                                                                                           Haseloff, James
Brand, Andrea
Perrimon, No. 56
Goodman, Howard
                                                                                                                                                                           (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Haseloff,
                                                                          ion
                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                  0.00013
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DATA:
?: PCT/US92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Howard M.
Trans-Splicing |
51
                                                                                                                                                                            PCT-US92-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCT-US92-00277-14
  No. 5641673bert Howard M.
                                                                            US/0809019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PC/TUS9200278
                                                                                                                                                                            00278-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goldstein & enue, N.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                           3476604
                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ribozymes
                                                                                                                                                                            1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           የጉ
                                                                                                                                                                            130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                    130
0
0
0
                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94
                                                                                                                             94
```

```
LATION:

Haseloff, James

LICANT: Brand, Andrea

LICANT: Perrimon, No. 584954

APPLICANT: Goodman, Howard M.

TITLE OF INVENTION: Cell Ablatic

NUMBER OF SEQUENCES: 56

CORRESPONDENCE ADDRESS:

ADDRESSEE: Sterne, Kessler, Gol-
STREET: 1100 New York Avenue
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READP
MEDIUM TV
                                                                                                                                                                                                                                                                                          RESULT 13
US-08-488-0
                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                      Query
DB:
                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                           US-09-85
                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMME: (202) 3/1-2540
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 131 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSE: Sterne, Kessler, Goldste
STREET: 1100 New York Avenue, Suite
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/090,193
FILING DATE: 23-DEC-1993
CLASSIFICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609.30800
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 11:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No::
                                                                                                                                                                                                                                                                                                                                                                                         7-
                                                                                                                                                                                                                                     031-11
11, Application US/08488031
o. 5849548
o. INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scores:
                                                                                                                                                                                                                                                                                                                                                                                           341-4
                                                                                                                                                                                                                                                                                                                                    54
                                                                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                                                                                                                                                                   (1-14)
                                                                                                                                                                                                                                                                                                                                                                                         x US-08-090-193-11 (1-131)
                                                                                                                                                                                                     ff, James
Andrea
on, No. 5849548bert
                                                                                                                                                                                                                                                                                                                                                                                                                    0.000131
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/090,193
                                                                                                                                                                            Ablation Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ablation Using Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07/642,330
                                                                                                                       Goldstein & F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goldstein & p. Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /00277
                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3080001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version
                                                                                                                                                                             Trans-Splicing
                                                                                                                    FOX
:e 600
                                                                                                                                                                                                                                                                                                                                                                                                                      131
0
0
0
                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                             Ribozyme
```

```
RESULT 14
US-08-486-5
; Sequence
; Patent No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best
                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-857-841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEPAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 11:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -80
                                                                    COUNTAL
ZIP: 20005
COMPUTER READABLE FORM:
COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                       ULT 14
08-486-569-11
                                                                                                                                                                                                                                                                                                      GENERAL
COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-SOFTWARE: Patentin Release # CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/48 FILING DATE: 07-JUN-1995 PRIOR APPLICATION NUMBER: 08/090,1 FILING DATE: 23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ent Similarity:
Local Similarity:
                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS SOFTWARE: PatentIn Release CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 23-DEC-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 07-JUN-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                           NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                      APPLICANT: Goodman TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        488-
                                                                                                                                                ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                             No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                           11
                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              54
                                                                                                                                                                          Washington
                                                                                                                                                                                                                                                                                                               l, Application US/08486569
5863774
                                                                                                                                    D.C.
U.S.A.
                                                                                                                                                                                                                                                                                                                                                                            1100 New York
                                                                                                                                                                                                                                               Brand, Andrea
Perrimon, No.
Goodman, Howar
                                                                                                                                                                                                                                                                                                                                                                                                                              (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM PC
SYSTEM:
                                                                                                                                                                                                                                                                                       Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER: 08/090,193
23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MBER: US/08/488,031
07-JUN-1995
                                    MBER: US/08/486,5
07-JUN-1995
MBER: 08/090,193
23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.000131
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                          , Howard
Cell Ab
: 56
                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-488-031-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               compatible PC-DOS/MS-DOS
                                                                                                                                                                                     Kessler, G
ork Avenue,
                                                                                                                                                                                                                                                                                        James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCT/US92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35,086
ER: 0609.
                                                                                                                                                                                                                                      Ablation Using
                                                                                                                                                                                                                                                                5863774bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #1.0,
                                                                           #1.0,
                                                                                                                                                                                     Goldstein & Fo
, N.W., Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3080002/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                  Ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Version
                                                                           Version
                                                                                                                                                                                                                                                                                                                                                                                                                              (1-131)
                                                                                                                                                                                                                                       Trans-Splicing
                                                                           #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                       131
14
0
0
                                                                                                                                                                                                                                                                                                                                                                              95
                                                                                                                                                                                                                                       Ribozymes
```

```
RESULT 15
US-08-488-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best I
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Bugaisky, Lawrence L.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 131 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Patent No
                                   ZIP: 20005

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, \
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,027
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/0027
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,33
FILING DATE: 17-JAN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -60
                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL
                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESSEE: SI STREET: 1100 CITY: Washing STATE: D.C. COUNTRY: U.S
                                                                                                                                                                                                                                                                                                                                                     APPLIC
TITLE
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
/ Match
                                                                                                                                                                                                                                                                                                                                                                                                      APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPI
FILI
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                          NUMBE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
   NAM!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity: cal Similarity:
                            PCT/UNITE: 16-JAN-1992
)R APPLICATION DATA:
PLICATION NUMBER: US 07
LING DATE: 17-...
                                                                                                                                                                                                                                                                                                                                        ICANT: Brand, Andrea
ICANT: Perrimon, No. 586
ICANT: Goodman, Howard N
E OF INVENTION: Cell Abl
ER OF SEQUENCES: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores
                                                                                                                                                                                                                                                                                                                                                                                                      CANT:
   E: Bugaisky, Law
ISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                        R OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION DATA:
LICATION NUMBER:
ING DATE: 16-JAN-
                                                                                                                                                                                                                                                                                                                                                                                                                              11, Application US/08488027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41-
                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                        Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Α
                                                                                                                                                                                                                                                                                                   3: Sterne, Kessler, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-14)
                                                                                                                                                                                                                                                                U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                       Haseloff,
                                                                                                                                                                                                                                                                                                                             ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.000131
69.00
100.00%
100.00%
100.00%
              Lawrence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-486-569-11
                                                                                                                                                                                                                                                                                                                                                                                                      James
                                                                                        PCT/US92/00277
                                                                                                                                                                US/08/488,027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT/US92/00277
ence B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 07/642,330
                                                                                                                                                                                                                                                                                                                                                      Ablation Using
                                                                                                                                                                                                                                                                                                                                                                              5866384bert
                                                  07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0609.3080006/MAC/LBB
                                                                                                                                                                                                                                                                                                     Goldstein (e, N.W., Su
                                                                                                                                                                                     ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches: Indels:
                                                                                                                                                                                         Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-131)
                                                                                                                                                                                                                                                                                                      in & Fo
                                                                                                                                                                                                                                                                                                                                                      Trans-Splicing Ribozymes
                                                                                                                                                                                                                                                                                                    Fox
te 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131
14
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95
```

```
; REFERENCE/DOCKET NUMBER: 0609.3080003/MAC/LBB
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
; INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 131 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
US-08-488-027-11
                                                                                                       Alignment Scores:
Pred. No.:
Score:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
Search completed: | Job time : 68 secs
                                           멍
                                                             ş
                                                                                  US-09-857-841-4 (1-14)
                                          54
                                          December
                                                                                   ×
                                                                                                      0.000131
69.00
100.00%
100.00%
100.00%
2
                                                                                   US-08-488-027-11
          5,
         2004,
          09:48:23
                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                   (1-131)
                                                                                                        131
0
0
0
                                           26
```

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Command line parameters:
-MODEL=frame+ p2n.model -DEV=xlh
-Q=/cgn2 1/USPTO_spool/US09857841/runat_03122004_160552_18628/app_query.fasta_
-DB=Published_Applications_NA -QFMT=fastap -SUFFIX=p2n.rnpb -MINMATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100
-THR_MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=(
-MAXLEN=200000000 -USER=US09857841 @CGN 1 1 480 @runat 03122004 160552_18628
-NCPU=6 -ICPU=3 -NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      earched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     geq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  o
f
                              Published Applications NA:*

1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/2/pubpna/US06_NEW PUB.seq:*

3: /cgn2_6/ptodata/2/pubpna/US06_NEW PUB.seq:*

4: /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*

5: /cgn2_6/ptodata/2/pubpna/US07_NEW PUB.seq:*

6: /cgn2_6/ptodata/2/pubpna/US08_NEW PUB.seq:*

7: /cgn2_6/ptodata/2/pubpna/US08_NEW PUB.seq:*

9: /cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*

10: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*

11: /cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq:*

12: /cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq:*

13: /cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq:*

14: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

15: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

16: /cgn2_6/ptodata/2/pubpna/US10C_PUBCOMB.seq:*

17: /cgn2_6/ptodata/2/pubpna/US10D_PUBCOMB.seq:*

18: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

19: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
Xgapop 10
Ygapop 10
Fgapop 6
Delop 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-1
69
1 MDKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum
Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3694831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      857-841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10.0
6.0
6.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
Match
first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        using
о
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2747406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0%
100%
45 ទា
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08:17:52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.5
0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      plus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 ; Search (without a 219.793 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rch time 350 Se
ut alignments)
3 Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7389662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>'</u>-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199
```

C 45	4	43	C 42	41	40	. W	э ы 8	) L	) ი ე ს	) (L	سا ( 4 ا	i (ci	C 32	31	30	c 29	N	27	N	c 25	N	23	22	21	20	19	18	_ ,	<b>.</b> ,	אר היי	٠,	<u>.</u>	. <sub>-</sub>	0 LO			c 7	6	ហ	4.	ω	N		Result No.
<b>4</b> 4	41	41	41			41.5	φ, '		4 (				42					**		42	•											7 4			4.5	47	**	**-		69				Score
9				59.4		60.1			· .	9.5			0	0	0	0	0	0	0	0	0	0	0	N	N	N I	N :	V !	V!	ى ر. •	ن د •			نا ز		ω.	8	9	<u>N</u>	_	00.	<u>.</u>	00	Query Match
	S	N	œ	œ	4	50	200	290	ν (c	8 2	7.4	50	S O	07	90	05	œ	μ	نر	ັຫ	$\mathbf{\mu}$	œ	ω S	Ω4	<b>-1</b>	10	97	ر د ر	2 6	א ממ	So	ν φ	٠.	jσ	ı G	võ	Ö	Ā	960	792	772	772	771	Length
10	16	18	18		17		17	, L																	18							)  -  -	, t		-	17	17	18	13	13		<u>1</u> 3		Ba
918-995-3374	S-10-424-599-3174	S-10-425-115-798	S-10-425-115-1345	-09-294-093B-1361	US-10-437-963-8924	-10-437-963-602	S-10-741-601-5720	S-10-225-56/A-23	S-09-800-274-1	S-10-43/-963-9	S-10-001-843-35	S-10-437-963-974	8-10-305-720-1267	-10-425-115-2014	-10-437-963-93102	-10-424-599-1135	-10-437-963-34410	-10-027-632-717	-10-027-632-717	S-10-437-963-323	S-10-437-963-1525	S-10-425-115-6311	-09-987-899-220	10-450-826-84	-10-425-115-1763	-10-425-115-86212	-10-425-115-1763	-10-425-115-17634	S-10-437-963-6480	15338-536-558- Ct07-W271-707-	785-4551-585-01- 502-W27-282-01-	-10-43/-963-64563 -10-383-1338-3638	8176-596-754-01-	10-43/-963-496I	-10-437-963-6364	S-10-437-963-3120	S-10-437-963-253	S-10-425-115-176	S-10-011-033-	-10-011-033-3	-10-011-033-	S-10-011-033-	US-10-011-033-	ID
e 3374, A	equence 3174	equence 79864,	equence 134580,	quence 1361,	Sequence 89248	equence 60204,	equence 5720, A	quence 23,	quence I, Ap	quence 931	e 35, API	e 9745	e 1267, A	e 20144,	e 93102	Sequence 113581,	e 34410	e 717,	e 717,	e 3235	e 15259,	e 63116,	equence 2205	equence 84, Ap	equence 176380,	equence 86212	equence 176386	emience 1763	quence 6480	Sequence Zotov, A	equence 20303,	になるの	equence 92187, .	equence 49610,	equence 63644,	equence 3120, A	equence 2533,	equence 176381	9, Ap	equence 3, Appl	equence 14, Apr	equence 1, App	quence	Description

9

```
RESULT 1
US-10-011-0
; Sequence
; Publicati
                                                                                                                                                                                           GENERAL
                                                                                      83
                                                                                                                                                                                 APPLICANT:
                            NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, N
STREET: 2 Prudential
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
                                                                                                                        ITLE
                                                                                                                                                                                          033-5
5, Application US/10011033
ion No. US20020124286A1
L INFORMATION:
         MPUTER
ZIP: 60000
                                                                                                                          ဝှု
                                                                                                                    NT: Boeshore, Maury L
McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
F INVENTION: Plants Resist
                            U.S.A.
                                                                : Rockey, Milnamow Prudential Plaza,
         FORM:
                                                                                                            Plants Resistant
Cucumber Mosaic 1
                                                              Plaza,
                                                                & Katz,
                                                                                                             t to C
Virus
                                                                , Ltd.
Stetson,
                                                                                                                         Strains
                                                                Suite
                                                                                                                         of.
                                                                4700
```

· # . · 라 : 模能 살다

Pred. score and i

No. is the nu greater than s derived by a

analy

equal

results l to the of the t

s predicted e score of t total score

e of the result be score distributi

to hav being tion.

printed

Ø

SUMMARIE

Or

number

18 Ø

Q

DMPUTER READABLE FORM:

```
RESULT 2
US-10-011-033-1
; Sequence 1, Application US/10011033
; Publication No. US20020124286A1
; GENERAL INFORMATION:
: APPLICANT: Boeshore, Maury L
McMaster, J. Russe
                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                          Query
DB:
                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                    -60-Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 771 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: Cucumber mosaic v
                                                                                                                                                                                                                                                                                                                                                                                                                                             011-
                                                                                                                                                                                                                                                                                                                    857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version Application DATA:
APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-200
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow & STREET: 2 Prudential Plaza, 1
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /standard
                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                              033-
                                                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: 3..660
LOCATION: 3..660
OTHER INFORMATION: /codon_start= 3
/function= "ENCAPSIDATES VIRUS RNA"
/product= "COAT PROTEIN"
/gene= "CP"
                                                                                                                                                                                                                                                                    Û
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: C
                                                                                                                                                                                                                                                                  ψı
                                                                                                                                                                                                                                                                                                                    4
                                                                                                                   ဝှု
                                                                                                  McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
F INVENTION: Planter
                                                                                                                                                                                                                                                                                                                   (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ndard_name=
DESCRIPTION:
                                                                                                                                                                                                                                                                                                                    14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE:
                                                                                                                                                                                                                                                                                                                   ×
                                                                                                                                                                                                                                                                                                                                          0.00072
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                    US-10-011-033-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                         "COAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                           IJ
                                                                                                   Resistant
er Mosaic V
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROTEIN"
                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                    ហ
                                                                                                                                                                                                                                                                                                                   1-
                                                   & Katz,
                                                                                                    Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version
                                                   Stetson,
                                                                                                                 Strains
                                                                                                                                                                                                                                                                                                                                            90004
                                                                                                                                                                                                                                                                                                                                                                                            .4
.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #1
                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                    44
                                                   Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            w
                                                                                                                  of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                    4700
```

```
Score:
Percent Similarity:
Best Local Similarity:
Ouery Match:
                                                                                                                                                                                                                        RESULT 3
US-10-011-033-14
; Sequence 14, Application US/10011033
; Publication No. US20020124286A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                       -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SD
                                                                                                                                                                                                                                                                                                                                                                       -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                       857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1
CURRENT APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-NO. US20020124286A1-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
TELEPHONE: 312-616-5400
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow & Katz, L
STREET: 2 Prudential Plaza, 180 N. St
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: 3..660
SEQUENCE DESCRIPTION: SI-033-1
                                                                                                                             ΩÄ
                                         Q
                                                                                                                                                                   Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ເນ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NTI-SENSE.
RIGINAL SOURCE:
ORGANISM: Cucumber Mosaic
ORGANISM ISOLATE: V-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores:
                                                                                                                                                                   ITLE
                                                                                                                                                                                                                                                                                                                                              \vdash
                                                                                                                                                                                                                                                                                                                       W
                                                                                                                                                                                                                                                                                                                     ဝှု
                                                                                                                                                    NT: Boeshore, Maury L
McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
Carney, Kim J
Cucumber Mosaic Vi
                                                                                                                                                                                                                                                                                                                                                                       (1-14)
                                                                                                                                                                                                                                                                                                                                                                     x US-10-011-033-1
                                                                                                                                                                                                                                                                                                                                                                                              0.000721
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NO:
                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                              Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                       (1-772)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              virus
                                                                                                     , Ltd.
Stetson,
                                                                                                                                                                   Strains of
                                                                                                                                                                                                                                                                                                                                                                                              772
14
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #1.30
                                                                                                     Suite
                                                                                                       4700
```

CLASSIFICATION:

<Unknown>

```
RESULT 4
US-10-011-033-3
; Sequence 3, Application
; Publication No. US20020;
; Publication INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                              Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                       -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 772 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                        -60
                                                                                                                                                                                                                                                                                                                                                                                                                                        ent Similarity:
Local Similarity:
/ Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .011-
                                                                                                                                                                                                                                                                                                                                                                                                       857-
ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, V

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/011,033

FILING DATE: 13-No. US20020124286A
                                                                                                       NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, N
STREET: 2 Prudential
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ANTI-SENSE: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
-033-14
                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scores:
                                                                                                                                                                                                                                                                                                                                                       Ü
                                                                                                                                                                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/10/011,033 FILING DATE: 13-No. US20020124286A1-CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                         Application US/10011033
No. US20020124286A1
                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: (INDIVIDUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE:
                                                                                                                                                                                                          ဝှု
                                                                                                                                                                                                                                                                                                                                                                                                       1-
                                                                                                                                                                                                      WT: Boeshore, Maury 1
McMaster, J. Rusi
Tricoli, David M
Reynolds, John F
Carney, Kim J
INVENTION: Plants 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                       14)
                                                                                                                                                                                                                                                                  Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO
                                                                                                                                                                                                                                                                                                                                                                                                     ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cucumber Mosaic
L ISOLATE: A35
                                                                                                                                                                                                                                                                                                                                                                                                                            0.000721
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn
                                                                                                                                           Rockey, Milnamow
Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                       US-10-011-
                                                                                                                                                                                            Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ
                                                                                                                                                                                                                                                       Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Release
 US/10/011,033
US20020124286A1-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IJ
                                                                                                                                                                                                                                                                                                                                                                                                       033
                                                                                                                                                                                            Resistant
er Mosaic V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1
                                                                                                                                             & Katz,
                                                                                                                                                                                                                                                                                                                                                                                                     (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ,0
                                                                                                                                                                                            to C
Virus
                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Version
                                                                                                                                             Stetson,
                                                                                                                                                                                                         Strains
                                                                                                                                                                                                                                                                                                                                                                                                                             00004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1
                                     #1
                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30
                                      30
                                                                                                                                              Suite
                                                                                                                                                                                                        Of.
                                                                                                                                              4700
```

8

ঠ

```
RESULT 5
US-10-011-0
; Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best I
Query
                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred
                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    us-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                            Sequence 9, Application US/10011033 Publication No. US20020124286A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HYPOTHETICAL.

ANTI-SENSE: NO
ORIGINAL SOURCE
ORGANISM:
ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

COMPUTER: Patentin Release #1.0, Versi

SOFTWARE: Patentin Release #1.0, Versi

CURRENT APPLICATION NUMBER: US/10/011,033

FILING DATE: 13-No. US20020124286A1-20

CLASSIFICATION SATA:

APPLICATION NUMBER: US/08/875,233

FILING DATE: 26-JUN-1997
                                                                                                                                                                                                     NUMBER OF SEQUEN CORRESPONDENCE ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
WAATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 792 base pairs
                                                                                                                                                                                                                                                                                                                APPLICANT:
                           י
                                                                          Ω
                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       വ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       냽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \rightarrow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ָּט
                                                                                                                                                                                                                                                       ITLE
                                                                                                                                                                                                                                                                                                                                                                033-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        033-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: 3..66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIOR APPLICATION DATA:
APPLICATION NUMBER: US/0
FILING DATE: 26-JUN-1997
TTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EATURE:
                                                                                                                                                                                                                                                                                                                                                                                                     w
                                                                                                                                                                                                                                                                                                                                                                                                                            \vdash
                                                                                                                                                        STREET: 2
CITY: Chi
STATE: I1
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                   MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                   ATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN: v-33
                                                                                                                                                                                                                                                        Q
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-14)
                                                                                                                                                                                                                                                      Reynolds, John Carney, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE:
NISM: CUCUMBER MOSAIC
                                                                                                                                                                                          SEQUENCES: 15
DENCE ADDRESS:
ESSEE: Rockey, Milnamow
ST: 2 Prudential Plaza,
                                                                                                                                                                    Chicago
: Illinois
                                                                                                                                                                                                                                                                                        McMaster, J. Ru
Tricoli, David
                                                                                                                                                                                                                                                                                                                Boeshore, Maury L
                                                                                                                                                        U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.000741
69.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-011-033-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                           Plants Resistant Cucumber Mosaic \
                                                                                                                                                                                                                                                                              John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ
                                                                                                                                                                                                       Milnamow
                                                                                                                                                                                                                                                                                                     Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/875,233
                                                                                                                                                                                                                                                                                וזי
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-792)
                                                                                                                                                                                            & Katz,
180 N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
••
                                                                                                                                                                                                                                           Virus
                                                                                                                                                                                                                                                       to C
                                                                                   Version
                                                                                                                                                                                             Stetson,
                                                                                                                                                                                                          Ltd.
                                                                                                                                                                                                                                                       Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           792
14
0
0
                                                                                    #1.
                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                      30
                                                                                                                                                                                             Suite
                                                                                                                                                                                                                                                        of.
                                                                                                                                                                                              4700
```

```
RESULT 6
US-10-425-115-176381
; Sequence 176381, Application US/10425115
; Publication No. US20040214272A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; TITLE OF INVENTION: Nucleic Acid Molecules a
; TITLE OF INVENTION: Plants
; FILE REFERENCE: 38-21(53222)B
; CURRENT APPLICATION NUMBER: US/10/425,115
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 369326
; SEQ ID NO 176381
; LENGTH: 3048
                                                                                        Score:
Percent
                                                                                                            Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent
Best Loc
Query Ma
                                                           Best I
Query
DB:
                                        us-
                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignme
Pred. 1
日
                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                        -SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 960 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
                                                                                                                                        TYPE: DNA
ORGANISM: Zea mays
FEATURE:
OTHER INFORMATION:
10-425-115-176381
                                       09
                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ent Similarity:
Local Similarity:
Y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                     Local :
Y Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.
                                        857-
                                                                                                                                                                                                                                                                                                                                                                                                                        857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ent
                                                                           Similarity:
al Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: cD
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
L-033-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT
                                                                                                                        Scores
 03
                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                        \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: CDS
LOCATION: 1..658
ENCE DESCRIPTION:
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: CUCUMBER STRAIN: STRAIN C
                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                       (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                        1
                                                                                                                                                                                                                                                                                                                                                                                                                        14)
                                       ×
                                                                                                                                                                                                                                                                                                                                                                                                                      ×
                                                                                                                                                     Clone
                                                          32.9
48.00
85.71%
57.14%
69.57%
18
                                                                                                                                                                                                                                                                                                                                                                                                                                          0.00827
64.00
92.86%
92.86%
92.75%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                        US-10-
                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-011-
                                                                                                                                                     ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ
                                        425-
                                                                                                                                                     MRT4577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOSAIC
                                       115
                                                                                                                                                                                                                                                                                                                                                                                                                        033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ď
                                                                                                                                                                                                                                                                  Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
O
                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                       -176381
                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VIRUS
                                                                                                                                                     9245
                                                                                                                                                                                                                                                                                                                                                                                                                        F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ø
                                                                                                                                                                                                                                                                                                                                                                                                                        Ó
                                                                                                                                                                                                                                                                   and
                                       1-
                                        u
                                       048)
                                                                                                                                                                                                                                                                   Other
                                                                                                                                                                                                                                                                                                                                                                                                                                           960
13
0
                                                            ₩₩₩₩₩
                                                                                                            048
                                                                                                                                                                                                                                                                   Molecules
                   14
1075
                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                 42
                                                                                                                                                                                                                                                                   Associated
                                                                                                                                                                                                                                                                   With
```

```
Alignment
Pred. No.:
Score:
Percent Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
US-10-437-9
; Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent &
Best Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                 TYPE: DNA
ORGANISM: Oryza sativa
FEATURE:
OTHER INFORMATION: Clone
JS-10-437-963-3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Publication I
GENERAL INFO
APPLICANT:
TITLE OF IN
TITLE REFEREI
CURRENT APPLICANT APPLICANT APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SULT 8
3-10-437-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 2533
LENGTH: 609
TYPE: DNA
ORGANISM: Oryza sativa
FEATURE:
OTHER INFORMATION: Clone
3-10-437-963-2533
                                                                                                                                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL
                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                          NUMBER OF SEQ ID NO 3
                                                                                                                                                                                                                                                               FILE REF
CURRENT
CURRENT
                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LICANT: Li, Ping
TLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Ass
TLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
LE REFERENCE: 38-21(53221)B
REENT APPLICATION NUMBER: US/10/437,963
REENT FILING DATE: 2003-05-14
UBER OF SEQ ID NOS: 204966
ID NO 2533
NGTH: 609
PE: TIME AND ADDRESS 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local S:
Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ເນ
                                                                                                                                                                                                                                                                                                                              22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e 2533, Application US/10437963 tion No. US20040123343A1 INFORMATION:
CANT: La Rosa, Thomas J.
CANT: Kovalic, David K.
CANT: Zhou, Yihua
                                        ••
 imilarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       imilarity:
l_Similarity:
                                                                                                                                                                                                  F INVENTION: Rice Nucleic Acid Molecules and Other Molecules F INVENTION: Plants and Uses Thereof for Plant Improvement FERENCE: 38-21(53221)B
APPLICATION NUMBER: US/10/437,963
FILING DATE: 2003-05-14
OF SEQ ID NOS: 204966
0 3120
: 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        963-3120
3120, Application US/10437963
ion No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             963-2533/c
2533, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    La Rosa, Thomas (
Kovalic, David Zhou, Yihua,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zhou, Yihua
Cao, Yongwei
Wu, Wei
Boukharov, An
Barbazuk, Bra
Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clone
                                                                                                                        Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ×
12.4
47.00
90.91%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.37
47.00
84.62%
69.23%
68.12%
                                                                                                                                                                                                                                                                                                                                                                                          , Andrey A.
Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-437-963-2533 (1-609)
                                                                                                                        ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ጆ ዓ
                                                                                                                     PAT_MRT4530_102831C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT_MRT4530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _102297C.
   792
10
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Associated
                                                                                                                                                                                                                                                                                                                                                     sociated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        With
```

```
RESULT 9
US-10-437-963-63644/c
; Sequence 63644, Appl:
; Publication No. US200; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                          Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
DB:
                                                                                                                                                                                                                                                                                                         Query
DB:
                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                                                                                             US-
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          us-09-
                   APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Mc
TITLE OF INVENTION: Plants and Uses The
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,91
CURRENT FILING DATE: 2003-05-14
                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                     US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid N
TITLE OF INVENTION: Plants and Uses T)
FILE REFERENCE: 38-21 (53221) B
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ
                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ I
SEQ ID NO 63644
LENGTH: 297
                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                      Publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/1
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: 10-437-963-63644
                                                                                                                                                                                                             10-437
                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
OTHER IN
IQ ID NO LENGTH:
                                                                                                                                                                                                                                                                                    857-841-
                                                                                                                                                                                                                                                                                                                   Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          857-841
                                                                                                                                                                                                                        10
                                                                                                                                                                                                             ٥
 DNA
                                                                                                                                                                                                                                                                                                                                                                       Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 734
                                                                                                                                                                                                                                            175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity:
                                                                                                                                                                                       49610, Application US/
on No. US20040123343A1
          49610
568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                               2
                                                                                                                                           La Rosa, Thom
Kovalic, Dav
Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                          Oryza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         La
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             344, Application US/10437963 No. US20040123343A1
                                                                                                                 Zhou, rr....Cao, Yongwei Wu, Wei
                                                                                                                                                                                                                                            GACAAAGCCGGGACGACCTCCGCCGCAAGGAATCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhou, rr....Cao, Yongwei Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 reggagageacercagergecegecege
                                                                                                                                                                                                                                                        AspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                             49610/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kovalic, Da
Zhou, Yihua
                                                                                                                                                                                                                                                                                    (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rosa, Thomas
ovalic, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14)
                                                                                                                                                                                                                                                                                                                                                                                                                          sativa
                                                                                                                                                       Thomas
David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ×
                                                                                                                                                                                                                                                                                    ×
                                                                                                                                                                                                                                                                                                                                                                                                      Clone
                                                                                                                                                                                                                                                                                                        10.6
45.00
84.62%
69.23%
65.22%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90.91%
68.12%
17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-
                                                                                                                                                                                                                                                                                    US-10-
                                                                                                                                                                                                                                                                                                                                                                                                      ID:
                                                                                                                                                          ጆ ኗ
                                                                                                                                                                                                  US/10437963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/10/437,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          437-
                                                                                                                                                                                                                                                                                    437-963-63644
                                                                                                                                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63-3120
                                                                                                                                                                                                                                                                                                                                                                                                    MRT4530
                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatche
                                                                        Molecules
Thereof fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Thereof for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                    _64867C.1
                                                                                                                                                                                                                                                                                    (1-297)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14
                                                                         for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plant
                                                                        Plant
                                                                                                                                                                                                                                            137
                                                                                                                                                                                                                                                                                                          000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0 0 H
                                                                       Other Molecules
                                                                                                                                                                                                                                                                                                                                                            97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Associated
                                                                                   With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        With
```

```
Best Local
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent
Best Loc
                                                                                                                                                                                                                  Percent
Best Loc
                                                                                                                                                                                                                                               Alignment Pred. No.:
                                                                                                           RESULT
US-10-4
                                                                                                                                                         र्
                                                                                                                                                                                                 DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred
                                                                                                                                                                             US-09-857-
                                                                                                                                                                                                                                                                            นูร-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                       Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                    SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                               GENERAL
                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                          LENGTH:
TYPE: D
ORGANIS
FEATURE
OTHER I
-10-437-9
                                                                                                          SULT 12
-10-437-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANIS
FEATURE
OTHER I
                                                                                                                                                                                                                                                                                                                                                      FILE REF
CURRENT
CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-85
                                                                                                                                                                                                                                                                                                                                             NUMBER
                                                                                                                                                                                                                  Loca
                                                                                                                                                                                                          Matcl
                                                                                                                                                                                                                                                                                                                                    ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.
                                                                                                                                                                                                                                                                                                                     LE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Assis OF INVENTION: Plants and Uses Thereof for Plant Improvement REFERENCE: 38-21(53221)8

ENT APPLICATION NUMBER: US/10/437,963

ENT FILING DATE: 2003-05-14

ER OF SEQ ID NOS: 204966

D NO 92187

TH: 571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity:
cal Similarity:
                                                                                                                                                                                                                           ເນ
                                                                                                                                                                                                         Similarity:
al Similarity:
tch:
                                                                                                                                                                                                                                               ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
                                                                              963-64563
64563, Application US/10437963
ion No. US20040123343A1
INFORMATION:
                                                                                                                                        380
                                                                                                                                                                                                                                                        Scores:
                                                                                                                                                                                                                                                                            963-92187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 963-92187/c
92187, Application US/10437963
ion No. US20040123343A1
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
963-49610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SM: Oryza sativa
                                                                                                                                                                             841-4
                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                        SM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141-4
                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                               La Rosa, Thomas
Kovalic, David
Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                La Rosa, Thomas
Kovalic, David
Zhou, Yihua
Cao, Yongwei
Wu, Wei
                                                                                                                                       Zhou, rime
Cao, Yongwei
Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspLysSerGluSerThrSerAlaGlyArgAsnArgArg
           Boukharov,
Barbazuk, F
                                                                                                                                                                             (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
  Ping
                                                                                                                                                                                                                                                                                   Clone
                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clone
                                                                                                                                                                                               33
44.00
84.62%
61.54%
63.77%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32.8
44.00
84.62%
61.54%
63.77%
                                                                                                                                                                            US-10-437-963-92187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-437-963-49610
             \square
            Andrey
Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ID:
                                                                                                                                                                                                                                                                                     ID:
                                                            <u>ኞ</u> :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ጅ 5
                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT_MRT4530_52178C.1
                      Þ
                                                                                                                                                                                                                                                                                   MRT4530
                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                     90693C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-568)
                                                                                                                                                                             (1-571)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                         342
                                                                                                                                                                                                 \circ \circ \circ \circ \circ \circ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    000005
                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                             Associated
```

With

¢

```
Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent
Best Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TITLE OF INVENTION: Rice Nucleic A
; TITLE OF INVENTION: Plants and Us
; FILE REFERENCE: 38-21(53221)B
; CURRENT APPLICATION NUMBER: US/10/
; CURRENT FILING DATE: 2003-05-14
; NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 64563
; LENGTH: 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                     APPLICANT: XU, H.

TITLE OF INVENTION: Identification FILE REFERENCE: ELITRA.034A

CURRENT APPLICATION NUMBER: US/10/2

CURRENT FILING DATE: 2003-02-20

PRIOR APPLICATION NUMBER: 60/191,07

PRIOR APPLICATION NUMBER: 60/206,84

PRIOR APPLICATION NUMBER: 60/207,72

PRIOR APPLICATION NUMBER: 60/207,72

PRIOR FILING DATE: 2000-05-26

PRIOR APPLICATION NUMBER: 60/230,33

PRIOR APPLICATION NUMBER: 60/230,33

PRIOR APPLICATION NUMBER: 60/230,34

PRIOR APPLICATION NUMBER: 60/242,57

PRIOR APPLICATION NUMBER: 60/253,62

PRIOR APPLICATION NUMBER: 60/253,62

PRIOR FILING DATE: 2000-11-27

PRIOR APPLICATION NUMBER: 60/257,93

PRIOR FILING DATE: 2000-11-27

                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JS-10-282-122A-26385/c
Sequence 26385, Appl:
Publication No. US20
GENERAL INFORMATION:
SEQ
                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                      Remaining
NUMBER OF
                                                       PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
TITLE OF IN
FILE REFERI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Oryza sat
FEATURE:
OTHER INFORMATION:
10-437-963-64563
                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
            SOFTWARE
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : Edal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nt Similarity:
Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match:
                                                       APPLICATION NUMBER: 60
APPLICATION NUMBER: 60
FILING DATE: 2001-02-0
APPLICATION NUMBER: 60
                                              FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2A-26385/c
6385, Application US/10282122A
n No. US20040029129A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                     ING DATE:
Prior App
SEQ ID NO
PatentIn
5385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wang,
                                                                                                                                                                                                                                                                                                                                                                               Malone, Chery Haselbeck, Ro Ohlsen, Kari Zyskind, Judi Wall, Daniel Trawick, Johr
                                                                                                                                                                                                                                                                                                                                                                                                                               Wang, Liangsu
Zamudio, Carlos
Malone, Cheryl
Haselbeck, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                       Carr, Gran
Yamamoto,
                                                                                                                                                                                                                                                                                                                                               Forsyth,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-
                      Application NOS: 78614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sativa
                                                                                                                                                                                                                                                                                                                                                                      Grant
                                                                                                                                                                                                                                                                                                                                                                                             Daniel
                                              2001-02-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone
                                                                                                                                                                                                                                                                                                                                                                                   John
                                                                                                                                                                                                                                                                                                                                                 ₩
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \omega 4 \omega \sigma
                                                                                                                                                                                                                                                                                                                                                                                                          Judith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35.6
14.00
34.62*
51.54*
53.77*
                                                                                                                                                                                                                                                                                                                                                            Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-
                                                                                                                                                                           60/230,347
                                                                                60
                                                          60
                                                                                                                                                                                                                                                                                                                        fication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IJ:
                                                                   22
0/267,
                                   data
                                                                                                                                                                                                                                                                                       US/10/282,
)2-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  437-963-64563
                                                          /269,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3/10/437,
14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Uses
                                                                                                                                                                                                     335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acid
                                                                                                                                                                                                                            727
                                                                                                                                                                                                                                                    848
                                                                                                                                                                                                                                                                           078
                                  removed
                                                          308
                                                                                636
                                                                                                        931
                                                                                                                               625
                                                                                                                                                        Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MRT4
                                                                                                                                                      78
                                                                                                                                                                                                                                                                                                                         0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 Molecules
Thereof for
                                                                                                                                                                                                                                                                                                   122A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  530
                                                                                                                                                                                                                                                                                                                         H
                                                                                                                                                                                                                                                                                                                         ssential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ัด
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  î
                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -615
                                   Ф
Ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and Other Molecules r Plant Improvement
                                                                                                                                                                                                                                                                                                                         Gene
                                  <u>1e</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           00260
                                Wrappe
                                                                                                                                                                                                                                                                                                                          Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ហ
                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                        Microorganisms
                                  9
                                   PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  With
```

```
Seque Seque Seque Seque Seque Seque Publica In APPLICANT: Za APPLICANT: Malo. APPLICANT: Malo. APPLICANT: Haselbe APPLICANT: Wall, Daniel APPLICANT: Wall, Daniel APPLICANT: Trawick, John APPLICANT: Yamamoto, Robert APPLICANT: Yamamoto, Robert APPLICANT: Yanamoto, Robert TITLE OF INVENTION: Identification of Esfils Reference: ELITRA.034A TOTAL TILING DATE: 2003-02-20 TOPLICATION NUMBER: 60/191,078 TOTAL DATE: 2000-03-21 TON NUMBER: 60/206,848 TE: 2000-05-23 NUMBER: 60/207,72 TOO NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-10-282-1
; Sequence
; Publicati
Alignment
Pred. No.:
Score:
Percent Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment
Pred. No.:
Score:
Percent Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best
                                                                                              us-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
                                                                                                                                                                                                       Remaining
NUMBER OF
                                                                                                                                                                                                                                                                                                                                     CURRENT
PRIOR AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: I
ORGANIS
-10-282-1
                                                                                                                                                                                                                                          PRIOR PRIOR PRIOR
                                                                                                                                                                   SOI
                                                                                                                                                                                                                                                                                                   PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                          LENGTH:
TYPE: D
ORGANIS
10-282-1
                                                                                                                                                                      SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ent Similarity:
Local Similarity:
/ Match:
                                                                                                                                         NT FILING DATE: 2003-02-20
APPLICATION NUMBER: 60/191,078
FILING DATE: 2000-03-21
APPLICATION NUMBER: 60/206,848
FILING DATE: 2000-05-23
APPLICATION NUMBER: 60/207,727
FILING DATE: 2000-05-26
APPLICATION NUMBER: 60/230,335
FILING DATE: 2000-09-06
APPLICATION NUMBER: 60/230,347
FILING DATE: 2000-09-09
APPLICATION NUMBER: 60/242,578
FILING DATE: 2000-10-23
APPLICATION NUMBER: 60/253,625
FILING DATE: 2000-11-27
APPLICATION NUMBER: 60/257,931
APPLICATION NUMBER: 60/257,931
FILING DATE: 2000-12-22
APPLICATION NUMBER: 60/269,308
FILING DATE: 2001-02-09
APPLICATION NUMBER: 60/269,308
FILING DATE: 2001-02-16
FILING DATE: 2001-02-16
NO 28450
TH: 2625
                                                                                                                                                                                                                                                                                    APAPAPAPAPAPAPAPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ••
                                                        Scores
                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                           SM: Mycobacterium
122A-28450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122A-28450/c
28450, Application US/10282122A
ion No. US20040029129A1
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SM: Mycobacterium 122A-26385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97.9
44.00
83.33%
75.00%
63.77%
165
44.00
83.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-282-122A-26385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bovis
                                                                                                                tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/10/282,122A
                                                                                                                                                                                                                              removed
Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Essential
                                                                                                                                                                                                                              See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-1603)
                                                                                                                                                                                                                              File
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genes
2625
9
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1603
9
1
2
0
                                                                                                                                                                                                                           Wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in Microorganisms
                                                                                                                                                                                                                               o
R
```

μ.

nilarity:

```
APPLICANT: La Rosa, Thomas J.

APPLICANT: Kovalic, David K.

APPLICANT: Zhou, Yihua

APPLICANT: Cao, Yongwei

APPLICANT: Wu, Wei

APPLICANT: Boukharov, Andrey A.

APPLICANT: Boukharov, Andrey A.

APPLICANT: Li, Ping

TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules APPLICANT: Li, Ping

TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

FILE REFERENCE: 38-21(53221)B

CURRENT APPLICATION NUMBER: US/10/437,963

CURRENT FILING DATE: 2003-05-14

NUMBER OF SEQ ID NOS: 204966

SEQ ID NO 86635

LENGTH: 969

TYPE: DNA

ORGANISM: Oryza sativa

FEATURE:

OTHER INFORMATION: Clone ID: PAT_MRT4530_85657C.1
                                                                                                                               Alignment Scores:
Pred. No.:
Score:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                    Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
US-10-437-963-86635/c
; Sequence 86635, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                              멍
                                                                     Ś
                                                                                              -Sn
Search completed: December Job time: 351 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-857-841
                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity:
/ Match:
                                                                                              -857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1273
                                                                                              841-4
                                              915
                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
                                                                                              (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                             ×
                                                                                                                    89.6
43.00
78.57%
57.14%
62.32%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         75.00%
63.77%
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-282-122A-28450
                                                                                             US-10-437-963-86635
          2
          2004,
           09:47:10
                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
Gaps:
                                                                                             -1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-2625)
                                                                                              969)
                                                                                                                     969
3
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 0 N
                                               874
                                                                      14
                                                                                                                                                                                                                                                                                                                                                                  Associated With
```

This Page Blank (uspto)

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                              Title:
Perfect
Sequence
                                                                                                                                                                                                                                               Word
                        Result
No.
                                                                                                                                                                                                   Comma
                                                                                                                                        Databas
                                                                                                                                                                                                                                                                                                                             Run
                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                         Searched
                                                                                                                                                coring
                                                                                                                                                                                                                                                                                                                                      prote
                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                               8ize
                                                                                                                                                                                                            processing:
 するこす
                                                Pred.
score
and is
                                                                                                                                                                                                                                     numbe
                                                                                                                                                                                                                                                                                               \mathbf{o}
                                                                                                                                                                                                                       DB
BG
                                                                                                                                                                                                                                                                                      table
                                                                                                                                                                                                                                                                                                    score
                                                                                                                                                                                                                                                                                                                                       ĺ
                        S
                        core
                                                 19
1
                                                                                                                                                                                                                      seq
seq
                                                No. is the nu greater than s derived by a
 14
14
14
                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                       nucleic
                                                                                                                                                                                                                                     H
                                                                                                                                                                                                                      length:
                                                                   GenEmbl: 1: gb ba
2: gb ht
3: gb ir
4: gb on
5: gb on
6: gb pl
9: gb pl
11: gb pl
11: gb 1
11: gb 1
11: gb 1
                                                                                                                                                                                                                                                                 OLIGO
Xgapop
Ygapop
Fgapop
Delop
                       Query
Match
                                                                                                                                                                                                                                     hit
                                                                                                                                                                                                                                                                                               US-
14
1 M
100.0
100.0
100.0
                                                                                                                                                                                                                                                        45
                                                                                                                                                                                                                                                                                                                            De
                                                                                                                                                                                                            Listing
                                                                                                                                                                                                                                                                                               MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                            cember
                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                  gb ba:

gb htg:

gb ov:

gb ov:

gb pat:

gb pat:

gb pat:

gb vi:

*
                                                                                                                                                                                                                                                                                                         -60
                                                                                                                                                                                                                                     \boldsymbol{\omega}
                                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                                                                                                                      search,
                                                                                                                                                                                                                                                        Ñ
                                                                                                                                                                                                                                     satis
                                                                                                                                                                                                                                                                                                         857-
                                                                                                                                                                                                                                                         φ
                                                number of results an or equal to the (
                                                                                                                                                                                                                                                                            \sigma
                                                                                                                                                                                                                      0
2000000000
                        ength
                                                                                                                                                                                                                                                        segs,
                                                                                                                                                                                                                                                                  0000
 53
130
130
130
                                                                                                                                                                                                             first
                                                                                                                                                                                                                                    fying
                                                                                                                                                                                                                                                                                                                            5,
                                                                                                                                                                                                                                                                  0000
                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                     GenCore (c) 1993
                         DB
                                                                                                                                                                                                                                                                                                                             2004,
                                                                                                                                                                                                                                                                                                                                      using
                                                                                                                                                                                                                                                                 Xgapext
Ygapext
Fgapext
Delext
 00001
                                                                                                                                                                                                                                                        2364484
                                                                                                                                                                                                             45
                                                                                                                                                                                                                                     chos
BD261798
AR031575
AR065687
AR097446
                                                                                                                                                                                                             summaries
                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                       m
                                                                                                                                                                                                                                                                                                                                       rame
                                                                                                                                                                                                                                     en
                                                                                                                                                                                                                                                                                                                                                     version - 2004
                                                                                                                                                                                                                                                                                                                             :07:
                                                                                                                                                                                                                                                         ø
                                                                                                                                                                                                                                                                  60.
                                                                                                                                                                                                                                                        145
                                                                                                                                                                                                                                    paramet
                                                predicted by chance to have score of the result being total score distribution.
                                                                                                                                                                                                                                                                                                                                      Buld
                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                   0000
                                                                                                                                                                                                                                                        residues
                                                                                                                                                                                                                                                                                                                  3 ; Search (without a 260.447 Mi
                                                                                                                                                                                                                                                                                                                                                    5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                      p2n model
                                                                                                                                                                                                                                     e H
                                                                                                                                                                                                                                     Ø
                                                                                                                                                                                                                                                                                                                  ch time 2542 s
it alignments)
Million cell
                                                                                                                                                                                                                                                                                                                                                     Ltd
                                                                                                                                                                                                                                     904105
BD261798
AR031575
AR065687
AR097446
                        Description
                                                                                                                                                                                                                                                                                                                             Seconds
                                                                                                                                                                                                                                                                                                                   updates/sec
                                                          have
                                                     printed,
Enhanceme
Sequence
Sequence
Sequence
                                                                                                                                                                                         199
                                                                                                                    RESULT 1
BD261798
LOCUS
DEFINITION
                                            COMMENT
                                                                TITLE
```

UI	#>	w	2	_	J	Ψ	ω	7	O1	O1	#2	w	~	_	J	Ψ	w	7	o	יט	#>	w	N	_	J	Ψ	w	7	<b>υ</b> 1	UI	#>	w	2	_	J	w.	w	7	Uì	<b>U</b> '	
																			14																						
00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	100.0	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	00	00.	00.	00.	00.	00.	00.	00.	00.	00.	00.	
U	ū	Uī	U	J	ū	Ü	U	U	U	G	U	U	ū	ū	U	Ú	U	ū	654	U	S	Ü	ū	Ü	ū	U	Ü	U	ហ	ū	ហ	U	ហ	ý	ហ	Ĺ	Ù	Ù	Ù	(L)	
							14												თ	σ	თ	σ	σ	σ	თ	σ	თ	σ	δ	თ	σ	თ	თ	6	თ	თ	თ	თ	თ	σ	
F52334	F52334	F52334	F52334	F52334	F52334	F52334	52	F52334	F52334	F52333	F36819	£35045	F31636	F28186	F19862	B10990	B07062	F44425		996	9962	09744	09744	06568	06568	031	03157	9960	9959	097	09744	06568	06568	03157	03157	1966	R09744	65	R03157	4996	
AF523349 Cucumber	2334	523347	AF523346 Cucumber	AF523345 Cucumber	AF523344 Cucumber	AF523343 Cucumber	52334	233	2334	2333	6819	045	6362	σ	9862	990	7062	4	0	963 Sequ	62 Sequence 1	97445	7444 Sequenc	5686 Sequenc	5685	1574	1573	60 Sequence	59 Se	7442	7441 S	5683 S	5682	AR031571 Sequence	1570	61 Seq	AR097443 Sequence	AR065684 Sequence	AR031572 Sequence	I49964 Sequence 14	

Ŝ

## ALIGNMENTS

ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM REFERENCE AUTHORS or cucumber BD261798 BD261798.1 Fang, R.X., Wu, J.L. and Chen, X.Y.
Enhancement in protein production by higher plants using ubiquitin or cucumber mosaic virus coating protein peptide
Patent: JP 2002532098-A 2 02-OCT-2002;
INSTITUTE OF MOLECULAR AGROBIOLOGY
OS Cucumber mosaic virus
PN JP 2002532098-A/2
PD 02-OCT-2002
PD 02-OCT-2002
PF 11-DEC-1998 JP 2000588378
PI RONG XIANG FANG, JUNG LIN WU, XIAO YING CHEN
PC C12N15/09, A01H5/00, C07K14/415, C07K19/00, C12N5/10, C12N15/00, PC JP 2002532098-A/2.
Cucumber mosaic virus (cucumber mosaic cucumber mosaic virus
Cucumber mosaic virus
Viruses; ssRNA positive-strand viruses, Cucumovirus.
1 (bases 1 to Enhancement Cucumber mosaic virus

JP 2002532098-A/2

02-OCT-2002

11-DEC-1998 JP 2000588378

RONG XIANG FANG, JUNG LIN WU, XIAO YING CHEN

C12N15/09, A01H5/00, C07K14/415, C07K19/00, C12N5/10, C12N15/00, C12N5/00 Enhancement in ubiquitin o cucumber mosaic 53 bp DNA linear PAT: in protein production by higher plants using mosaic virus coating protein peptide. GI:33071566 mosaic 53) protein production virus coating protein λq cucumovirus) no higher peptide DNA stage; plants PAT Bromoviridae using 17-JUL-2003 Jubiquitin င္ပ PC

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Pred. No.:
               REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                     RESULT 3
AR065687
LOCUS
                                                                                                                                                                                   Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                         Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
AR031575
LOCUS
                                                                                                                                                   გ
                                                                                                                                      멍
                                                                                                                                                                     us-
                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
         FEATURES
                                                                SOURCE
                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                            us-09-
                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                 EATURES
                                                        ORGANISM
                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ent Similarity:
Local Similarity
/ Match:
                                                                                                                                                                                           ent Similarity:
Local Similarity:
/ Match:
 sourc
                                                                                                                                                                                                                                                                         sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ourc
                                                                                                                                                                                                                                                                                                                                                                                                                                             857-
                                                                                                                                                                     857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O
                                                                                                                                                                     841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                         Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ወ
                                                                                                                                      ហ
                                               Unknown.
Unknown.
Unclassified.
                                                                             AR065687
Sequence
AR065687
AR065687.
                                                                                                                                                                                                                                                                                                                                                     AR031575
Sequence
AR031575
AR031575.
                                                                                                                                                                                                                                                                          Unclassified.

1 (bases 1 to 130)

1 (bases 1 to 130)

Haseloff, J., Brand, A., Perrimon, N. and Cell ablation using trans-splicing repatent: US 5866384-A 14 02-FEB-1999;

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                              Unknown.
Unknown.
1 (bases 1 to 130)
Haseloff, J., Brand, A., Perrimon, N. & Cell ablation using trans-splicing patent: US 5849548-A 14 15-DEC-1998;
Location/Qualifiers
1. .130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ę
                                                                                                                                                    ب
                                                                                                                                      Ü
                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                            \vdash
                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers (6). .(
CDS Location/Qualifiers
                                                                                                                                                                    (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Locat:
                                                                                                                                                                                                                                                    1. .130
/organism="unknown"
/mol_type="unassigned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Cucumber mosai
/mol_type="genomic DNA"
/db_xref="taxon:12305"
                                                                                                                                                                    ×
                                                                                                                                                                                                                                                                                                                                                                                                                                            ×
                                                                                                                                                                                  1.68e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.9e-06
14.00
100.00%
100.00%
100.00%
                                                                               GI:
                                                                                                                                                                                                                                                                                                                                                      GI:
                                                                                                                                                                                                                                                                         .130
                                                                                               from
                                                                                                                                                                                                                                                                                                                                                                      m
                                                                                                                                                                    AR031575
                                                                                                                                                                                                                                                                                                                                                                     rom
                                                                                                                                                                                                                                                                                                                                                                                                                                            BD261798
                                                                                995903
                                                                                                                                                                                                                                                                                                                                                      945864
                                                                                                                                                                                                                                                                                                                                                                     patent
                                                                                              patent
                                                                                                                                                                    (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                            1-
                                                                                                                                                                                                                                                                                                                                                                     130 bp
US 5866384.
                                                                                               US I
                                                                                                                                                                                                                                                                                                                                                                                                                                            ហ
                                                                                                                                                                    .30)
                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                      w
                                                                                                                                                                                                                                                                                                                                                                                                                                            £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservati
Mismatches
Indels:
                                                                                               30 bp
5849548
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (47)
                                                                                                                                                                                                                                                          DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ω
               and Goodma
ribozymes
8;
                                                                                                                                                                                                                                                                                               and Goodn
                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus
                                                                                                                                   ccrcci
                                                                                                                                                                                                                                                                                                        Goodman,
                                Goodman, H.M
                                                                                                                                                                                                                                                                                                                                                                                                                                                          00000
                                                                                                                                                                                    130
14
0
0
                                                                                                       linear
                                                                                                                                                                                                                                                                                                 Œ
                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                             47
                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                              PAT
                                                                                                       29-
                                                                                                                                                                                                                                                                                                                                                                              29-
                                                                                                       SEP-1
                                                                                                                                                                                                                                                                                                                                                                              EP-1999
                                                                                                       999
```

```
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                          RESULT 5
I49964
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                        Percent
Best Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
AR09744
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
Pred. No.:
                                                                                                                                                                                                                                               Query
                                                                                                                                                                                       밁
                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                        -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                         BG
                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sn
 Alignment
                  ORIGIN
                                                                                                                                                                                                                                                                                         Alignment
                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                  Pred.
                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                 TITLE
JOURNAL
FEATURES
                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                        09-85
                                                                                                                                                                                                                                                         Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                       T 4
                                          Bourc
                                                                                                                                                                                                                                                                                                                                  Bourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -857-
                                                                                                                                                                                                                                                Local
Matcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                                                                                 ល
                          Unclassified.

1 (bases 1 to 130)

1 (bases 1 to 130)

Haseloff, J., Brand, A., Perrimon, N. and Goodman, H.M.

Cell ablation using trans-splicing ribozymes

Patent: US 5641673-A 14 24-JUN-1997;

Location/Qualifiers

130
                                                                                                                                                                                                                                                      imilarity:
l Similarity:
                                                                                                                                                                                                                                                                                  ••
                                                                                                                                                                                                                        841-
Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                          Scores:
                                                                                                                                                                                       53
                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
Unknown.
Unclassified.
                                                                                                                            I49964
Sequence
I49964
I49964.1
                                                                                                                                                                                                                                                                                                                                                                                                                    AR097446
Sequence
AR097446
AR097446.
                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 130)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,H.M.
Cell ablation using trans-splicing ribozymes
Patent: US 6071730-A 14 06-JUN-2000;
Location/Qualifiers
                                                                                                            Unknown
                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ù
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                        (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                              14
                         /organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                   /organism="unknown"
/mol_type="unassign
                                                                                                                              GI:2472184
                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                       1.68e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.68e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                              from
                                                                                                                                                                                                                                                                                                                                  .130
                                                                                                                                                                                                                                                                                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                      GI:12806176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR065687
                                                                                                                                                                                                                        AR097446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _type="unassigned
                                                                                                                                                                                                                                                                                                                  _type="unassigned
                         _type="unassigned
                                                                                                                                                                                                                                                                                                                                                                                                                                     patent
                                                                                                                                             patent
                                                                                                                                                                                                                        (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1-
                                                                                                                                             130
US 56
                                                                                                                                                                                                                                                                                                                                                                                                                                      130 bp
US 6071730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 130)
                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                        Gaps
                                                                                                                                             ) bp
5641673
                          DNA"
                                                                                                                                                                                                                                                                                                                   DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130
14
0
                                                                                                                                                                                                                                         130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -ω
                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                      linear
                                                                                                                                                                                                       14
                                                                                                                                                                                       94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                       14-FEB-
                                                                                                                                                      07-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                               2001
```

```
rercent Similarity:
Best Local Similarity:
Query Match:
DB:
Alignment Scores:
Pred. No.:
Score:
Score:
Percent Similarity:
Best Local Similarit;
Query Match:
                                                                                                                                        LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No
Score:
Percent
Best Loc
Query Ma
DB:
                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT (AR03157;
                                                                                                                                                                                    RESULT
AR06568
                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                              Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -Sn
                                                      ORIGIN
                                                                                                                                                                                                                                         US-09-
                                                                                                                                                                                                                                                                                                    Alignment
                                                                                    EATURES
                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cent Similarity:
Local Similarity:
Y Match:
                                                                                                                                                                                    T 7
                                                                             source
                                                                                                                                                                                                                                                                                                                                            Bourc
                                                                                                                                                                                                                                                                                              No.
                                                                                                                                                                                                                                          857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57-
                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 0
                                                                                                                                                                                                                                                                                              ••
                                                                   Unclassified.

1 (bases 1 to 131)

1 (bases 1 to 131)

Haseloff, J., Brand, A., Perrimon, N. ar

Cell ablation using trans-splicing ri

Patent: US 5849548-A 11 15-DEC-1998;

Location/Qualifiers

131
                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                      Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                      AR065684
Sequence 11
AR065684
AR065684.1
                                                                                                                                                                                                                                                                                                                                                                                                                      AR031572
Sequence
AR031572
AR031572.
                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
Unknown.
                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 131)
Haseloff, J., Brand, A., Perrimon, N. a
Cell ablation using trans-splicing r
Patent: US 5866384-A 11 02-FEB-1999;
Location/Qualifiers
                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                         Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                           4
                                                                                                                                                                                                                                         (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-14)
        ,ty
                                                                                                                                                                                                                                                                                                                                                                                                                       ï
                                                                                                                                                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                      11
                                                                                                                                                                                                                                                                                                                     1. .131
/organism="unknown"
/mol_type="unassigned
                                                           /organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                                        1.69e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.68e-05
14.00
100.00%
100.00%
100.00%
1.69e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                       GI:
                                                                                                                                                                                                                                                                                                                                                                                                                                    from
                                                                                                                                                       GI:5995900
                                                                                                                                                                      H
                                                                                                                                                                      rom
                                                                                                                                                                                                                                         AR031572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         I49964
                                                                                                                                                                                                                                                                                                                                                                                                                       5945861
                                                                                                                                                                                                                                                                                                                                                                                                                                    patent
                                                                                                                                                                     patent
                                                                                                                                                                                                                                                                                              05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         î
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .-130)
                                                                                                                                                                                                                                         (1-131)
                                                                                                                                                                     131
US 5
                                                                                                                                                                                                                                                                                                                                                                                                                                     131
US 51
                                                            signed
Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                      L bp
5849548
                                                                                                                                                                                                                                                                                                                                                                                                                                     L bp
5866384
                                                                                                                                                                                                                                                                                                                            DNA
                                                             DNA"
                                                                                          and Goodman,H.M. ribozymes
                                                                                            \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                 and Goods
                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                         Goodman,
                                                                                                                                                                                                                                                        0 0 0 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        00004
 131
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130
                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                          14
                                                                                                                                                                                                            95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94
                                                                                                                                                                              PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                              29
                                                                                                                                                                              29-SEP-
                                                                                                                                                                                                                                                                                                                                                                                                                                              -SEP-1999
                                                                                                                                                                              1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -Sn
 S
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BB
                -Sn
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                          Alignment Pred. No. Score:
                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                            RESULT 9
I49961
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                         Alignment Pred. No.:
                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 8
                                 Query
DB:
                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                          -60-Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Locus
                                                                  Score:
                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                      ORGANISM
                -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -60
                                                                                                                                                                                                                                                                                                                                                                                                                      sourc
                                                                                                                             Bourc
                                                                          No.:
                85
                                                                                                                                                                                                                                                                                                          85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ယေထ
                                                                                                                                                                                                                                                                                                                                                                    ••
                                                                                                                                                                                                                                                                                                                                                                                                            Unclassified.

1 (bases 1 to 131)

1 (bases 1 to 131)

Haseloff, J., Brand, A., Perrimon, N. and Cell ablation using trans-splicing rill Patent: US 6071730-A 11 06-JUN-2000;

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841-
                                                                                                                                                                                                                                                                        54
                41-
                                                                                                                                                                                                                                                                                                          41-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54
                                                                                   cores
                                                                                                                                                                                                                                                                                                                                                                            cores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR097443
Sequence 11
AR097443
AR097443.1
                                                                                                                                                                                     Unknown.
Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
                                                                                                                                                                                                            149961
Sequence
149961
149961.1
                                                                                                                                  1 (bases 1 to 131)
Haseloff,J., Brand,A., Perrimon,N. and Goodman,H.
Cell ablation using trans-splicing ribozymes
Patent: US 5641673-A 11 24-JUN-1997;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \vdash
                                                                                                                                                                    Unclassified.

1 (bases 1 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                7-
                                                                                                                                                                                                                                                                                                          (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-14)
                14)
                                                                                                                                                                                                                              11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11
                                                                                                           /organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                                    'organism="unknown"
'mol_type="unassign
                                                                                                                                                                                                              GI:
                                                                                                                                                                                                                                                                                                         ×
               ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                1.69e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                         1.69e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                               from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:12806173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR065684
                I49961
                                                                                                                                                                                                               2472181
                                                                                                                                                                                                                                                                                                          AR097443
                                                                                                           type="unassigned
                                                                                                                                                                                                                              patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        patent
                                                                           05
                1-
                                                                                                                                                                                                                                                                                                          (1-131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-131)
                131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US (
                                                                                                                                                                                                                              131 bp
US 5641673
                                                                                                                                                                                                                                                                                                                                                                                                    gned
                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservati
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31 bp
6071730
                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                     DNA"
                                                                                                            DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                             and Goodman,H.M
ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                           ive
                                131
14
0
0
                                                                                                                                                                                                                                                                                                                                                           131
14
                                                                                                                                                                                                                                                                                                                           0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
 14
                                                                                                                                                                                                                                                                         98
                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                        PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT
                                                                                                                                                                                                                                        07-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-FEB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001
```

STREET NOTE OF THE

```
Alignment
Pred. No.:
Score:
Sercent Si
Best Local
Query Matc
DB:
                                                                                                                                                                                                                                                      RESULT 11
AR031571
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                      DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                 Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
AR031570
RESULT
AŖ06568
                                                                                                                                                                                                                                                                                                                                                                      Alignment
Pred. No.:
                       4
                                     श
                                                     SD
                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                  S
                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                  us-09-
                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                           ORGANISM
                                                      9
                                                                                                                                                                                                                                                                                                                                        cent Similarity:
Local Similarit
cy Match:
                                                                          ent Similarity:
Local Similarity:
y Match:
                                                                                                                                                       Bource
                                                                                                                                                                                                                                                                                                                                                                                                                   source
 8
                                                                                                                                                                                                                                                                                                                  857-841
 12
                                                     v
                                                                                                                                                                                                                                                                                                                                                                       ..
                                                                                                                                                                                                                                                                                                                                                                                                            Unknown...
Unclassified.
1 (bases 1 to 152)
1 (bases 1 to 152)
Haseloff, J., Brand, A., Perrious Cell ablation using trans-spectation using trans-spectation ablation patent: US 5866384-A 9 02-FE Location/Qualifiers
                                                     \boldsymbol{\omega}
                                                                                                                Scores
                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54
                                                                                                                                                                                                                              AR031571
Sequence
AR031571
AR031571.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR031570
Sequence 9
AR031570
AR031570.1
                                                                                                                                                           Unclassified.

1 (bases 1 to 152)

1 (bases 1 to 152)

Haseloff, J., Brand, A., Perrimon, N.

Cell ablation using trans-splicing

Patent: US 5866384-A 10 02-FEB-1999

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
Unknown.
                       ហ
                                     \vdash
                                                                                                                                                                                                                                                                                     ហ
                                                                                                                                                                                                           Unknown
                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                   \vdash
                                 MetAspLysS
                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGA'
                                                                                                                                                                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                                                                                                  <u>-</u>1
                                                     î
                                                                                                                                                                                                                                571.1
                                                                                                                                                                                                                                                                                                                                               ty:
                                                     14)
                                                                                                                                                                                                                                                                                                                 14)
                                                                                                                                                                                                                                               10
                                                                                                                                       1. .152
/organism="unknown"
/mol_type="unassign
                                                                                                                                                                                                                                                                                                                                                                                             1. .152
/organism="unknown"
/mol_type="unassign
                                                     ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from
                                                                                                                                                                                                                                                                                                                 ×
                                                                   1.96e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                               1.96e-05
14.00
100.00%
100.00%
100.00%
                      GI:5945860
                                                                                                                                                                                                                                               m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:594585
                                                     AR03
                                                                                                                                                                                                                                               rom
                                                                                                                                      _type="unassigned
                                                                                                                                                                                                                                                                                                                  AR0315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pat
                                                     15
                                                                                                                                                                                                                                              patent
                                                                                                         05
                                                                                                                                                                                                                                                                                                                                                                      05
                                                     71
                                                                                                                                                                                                                                                                                                                  70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                 1-
                                                     \widehat{\Box}
                                                                                                                                                                                                                                                                                                                                                                                                                         Perrimon, N. a
ans-splicing r
02-FEB-1999;
ifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SD
                                                                                                                                                                                                                                               15
US
                                                                                                                                                                                                                                                                                                                  152)
                                                                                                                                                                                                                                                                                                                                                                                                  igned
                                                     ហ
                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ហហ
                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                                                                                                                                                                               ហស
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 bp
                                                     8
                                                                                                                                                                                                                                               œ
                                                                                                                                                                                                                                               ър
366384
                                                                                                                                                                                                                                                                                                                                                                                                    DNA"
                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84
                                                                                                                                                                  and Goodr
g ribozymer
99;
                                                                                                                                                                                                                                                                                                                                                                                                                                       and Goodma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                             ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                Goodman,
                                                                                                                                                                                   Goodman,
                                                                                                                                                                                                                                                                                                                                000015
                                                                    inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inear
                                      14
                                                                                                                                                                                                                                                                                     116
                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ហ
                                                                                                                                                                                                                                                       PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT
                                                                                                                                                                                                                                                      29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-
                                                                                                                                                                                                                                                       SEP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EP-1
                                                                                                                                                                                                                                                       1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   999
```

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                             Percent Sim
Best Local
Query Match
DB:
                                        RESULT 14
AR097441
                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                  RESULT 13
AR065683
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                Query
DB:
                                                               g
                                                                                              SD
                                                                              S
                                                                                                                                                   Pred
                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                us-
                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                  日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FOCUS
                                                                                                                                                          Alignment
                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                      ORGANISM
                                                                                              -60
                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                 sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sourc
                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                   No . :
                                                                                              85
                                                                                                                                                                                                                                                                                                                                                                85
                                                                                                                         Similarity:
al Similarity:
                                                                                               7 -
                                                                                                                                                                        Unknown.

M Unknown.

Unclassified.

1 (bases 1 to 152)

3 Haseloff, J., Brand, A., Perrimon, N. and Goodman Cell ablation using trans-splicing ribozymes

L Patent: US 5849548-A 10 15-DEC-1998;

Location/Qualifiers

1 .152

--"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.

Unclassified.

(bases 1 to 152)

(bases 1 to 152)

Haseloff, J., Brand, A., Perrimon, N. ar Cell ablation using trans-splicing ripatent: US 5849548-A 9 15-DEC-1998;

Location/Qualifiers

1. .152

1. .152
                                                                                                                                                           Scores
                                                                                                                                                                                                                                                                                                                                                                \mathbf{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                               75
                                                                                              41
       AR097441
Sequence :
AR097441
AR097441.:
                                                                                                                                                                                                                                                                           AR065683
Sequence 1
AR065683
AR065683.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR065682
Sequence
AR065682
AR065682.
                                                                                                                                                                                                                                                                                                                                  U
                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                 4
                                                                                              (1-14)
                                                                                                                                                                                                                                                                                                                                                                (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .152
/organism="unknown"
/mol_type="unassigne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>.</u>
          Н
                                                                                                                                                                                                                                                                                            10
                          φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                ×
                          H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from
                                                                                                            1.96e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                              1.96e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                           from
                          rom
          GI:12806171
                                                                                                                                                                                                                                                                             GI:5995899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:5995898
                                                                                                                                                                                                                                                                                                                                                                AR065682
                                                                                              AR065683
                        patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            patent
                                                                                                                                                                                                                                                                                          patent
                                                                                              (1-15)
                                                                                                                                                                                                                                                                                                                                                                (1-152)
                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sn
                                                                                                                                                                                                                                                                                            15
US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             152 bp
S 5849548.
                          ത ഗ
                                                                                                                  Length:
Matches:
Conservative
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                            52 bp
5849548.
                         2 b
                                                                                                            Gaps:
                                                                                              2)
                          DNA"
                          w
                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and Goodma
                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                    ive
                                                                                                                                                                                                                              Goodman, H.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goodman, H.M
                                                                                                                                                                                                                                                                                                                                                                               0 0 0 0 15
                                                                                                             0 0 0 0 0 0 0
                                line
                                                                                                                                                                                                                                                                                                   line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                              14
                                                               116
                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                   11
                                ar
                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                    ĸ
                                PAT
                                                                                                                                                                                                                                                                                                    PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT
                                 14-
                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-SEP-1999
                                                                                                                                                                                                                                                                                                    φ
                                 ·FEB-
                                                                                                                                                                                                                                                                                                   SEP-
                                 2001
                                                                                                                                                                                                                                                                                                    1999
```

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
Pred. No.:
Score:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                RESULT 15
AR097442
LOCUS
Search completed:
Job time : 2542 so
                                    8
                                                    $
                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                          US-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                       US-09-857-841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                          857-
                                                                                                                                   Unknown.

W Unknown.

Unclassified.

1 (bases 1 to 152)

Haseloff,J., Brand,A., Perrimon,N. and Goodman,
Cell ablation using trans-splicing ribozymes

Patent: US 6071730-A 10 06-JUN-2000;

Location/Qualifiers

1. .152

/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M Unknown.
Unclassified.
1 (bases 1 to 152)
1 (bases 1 to 152)
2 Haseloff, J., Brand, A., Perrimon, N. and Goodman, H.M.
Cell ablation using trans-splicing ribozymes
2 Patent: US 6071730-A 9 06-JUN-2000;
2 Location/Qualifiers
3 1. 152
3 /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                          841-
                                    75
                                                                                                                                                                                                                                                                                                                                                      75
                                                                                                                                                                                                                                                                                    AR097442
Sequence 10
AR097442
AR097442.1
                                                                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                    4
1: December secs
                                                                                                                                                                                                                                                                                                                                                                                         (1-14)
                                                                       (1-14)
                                                                                                                                                                                                                                                                                                         10
                                                                       ×
                                                                                                                                                                                                                                                                                                                                                                                         ×
                                                                                         1.96e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                          1.96e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                         from
                                                                                                                                                                                                                                                                                      GI:12806172
                                                                        AR097442
                                                                                                                                                                                                                                                                                                                                                                                          AR097441
        Ş
                                                                                                                                                                                                                                                                                                       patent
         2004,
                                                                        (1-152)
                                                                                                                                                                                                                                                                                                                                                                                          (1-152)
                                                                                                                                                                                                                                                                                                         152 bp
US 6071730
         10:36:25
                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                Goodman, H.M.
                                                                                          152
14
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                           152
14
0
0
                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                       14
                                                      14
                                                                                                                                                                                                                                                                                                                                                      116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
K
                                                                                                                                                                                                                                                                                                                 PAT
                                                                                                                                                                                                                                                                                                                  14-FEB-2001
```

This Page Blank (uspto)

```
Title:
Perfect s
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                              Post
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run
                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                   Command line parameters:
-MODEL=frame+_p2n.model -DEV=xlh
-Q=/cgn2_1/USPTO_spool/US09857841/runat_03122004_160613_19108/app_query.fasta-Q=/cgn2_1/USPTO_spool/US09857841/runat_03122004_160613_19108/app_query.fasta-DB=N_Geneseq_23Sep04_-QFMT=fastap_-SUFFIX=olip2n.rng_-MINMATCH=0.1 -LOOPCL=0-LOOPEXT=0 -UNITS=bits_-START=1 -END=-1 -MATRIX=oligo_-TRANS=human40.cdi
-LOOPEXT=0 -UNITS=bits_-START=1 -END=-1 -MATRIX=oligo_-TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=quality_-THR_MIN=1 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto_-NORM=ext_-HEAPSIZE=500_-MINLEN=0 -MAXLEN=200000000
-USER=US09857841_@CGN_1_1_470_@runat_03122004_160613_19108_-NCPU=6 -ICPU=3
-NO_MMAP_-LARGEQUERY_-NEG_SCORES=0_-WAIT_-DSPBLOCK=100_-LONGLOG
-DEV_TIMEOUT=120_-WARN__TIMEOUT=30_-THREADS=1_-XGAPOP=60_-XGAPEXT=60_-FGAPOP=6
-FGAPEXT=7_-YGAPOP=60_-YGAPEXT=60_-DELOP=6_-DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 coring
                                                                                 gult
                                                                     No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rched:
                                                                                                                                                                                                                                                                                                                                                                                                                              -processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   size
   469
                                                                                                                       Pred. I score sand is
                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG
BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               score
                                                                       S
                                                                       core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                 вед
                                                                                                                                                                                                                                                                                                                                                                                                                                                          geq
                                                                                                                       No. is the greater to a derived
    о́т
Г
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                               length:
length:
                                                                                                                                                           N Geneseq 1: genesee 2: genesee 3: genesee 5: genesee 6: genesee 7: genesee 9: genesee 10: genesee 111: genese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OLIGO
Xgapop
Ygapop
Fgapop
Delop
                                                                     Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hit
           100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                             Listing
    00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ecemb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Copyright
                                                                                                                                 the nu
                                                                                                                                                          Geneseq_23Sep04:*
    geneseqn1980s:*
    geneseqn1990s:*
    geneseqn20001as:*
    geneseqn2001bs:*
    geneseqn2002bs:*
    geneseqn2003as:*
    geneseqn2003bs:*
    geneseqn2003ds:*
    geneseqn2003ds:*

                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ø
    000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \boldsymbol{\omega}
                                                                                                                       γd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               atis
                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
2000000000
                                                                                                                                         number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60.
60.
                                                                                                                     n or equal analysis c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
   53
771
772
772
772
773
976
                                                                                                                                                                                                                                                                                                                                                                                                                              first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ភ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2004,
                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nsing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                           ō
f
    22222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       262471
                                                                                                                                                                                                                                                                                                                                                                                                                              45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chosen
                                                                                                                       results l to the of the t
 AAA30858
AAT34666
AAT37259
AAT17259
AAT34669
AAQ10461
                                                                      D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                              summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05
                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24:43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \sigma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              paramet
                                                                                                                      predicted by chance to have a score of the result being printed, total score distribution.
    80497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  snlď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Search (without a 225.435 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   p2n mode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch time 326 Se
it alignments)
Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45
Aaa30858
Aat34666
Aat34664
Aat17259
Aat34665
Aaq10461
                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            updates/sec
Ubiquitin
Coat prot
                                                                                                                                                                                                                                                                                                                                                                                       φ
```

000000	ი ი	000	000 00	იი	oο
440 441 443 444	0 0 J 0 U 1		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	113 113 114 115 117 118 119 120	7 8 9
7777	77777	37777	111788	111111 44446668	
000000	00000	99999	000077	100.0 100.0 100.0 100.0 85.7 85.7 85.7 64.3 64.3	0000
	V & O C 4 T	150000	ちりゅうようこ	1379 1696 2173 657 1423 1423 2208 2361 2361	9900
ហហហហហ	5 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	, p. v. v. o. r		111122232222	8888
V8824 V0060 V3117 V3992 V3986 V4014	419 724 724 733 733	5729 5729 5676 5083	0713 7888 5808 9772 2121 1058	AAN81111 AAQ76107 AAQ76108 AAQ76108 AAQ76108 AAQ03641 ABL58209 AAN90249 AAN90249 AAN72272 ABD15071 ABD15071 ABD15266 ABD14864 ABD14864	1046 6739 9954 0750
44 Human 09 Human 73 Human 20 Human 66 Human 42 Human	Abz41931 N. gonorr Ach47248 Human inf Abv00831 Human pro Adn73300 Thale cre Abv30952 Human pro	Bovi Huma Huma 4 Kle	131 88 D 08 M 08 M 72 H 72 H 21 H 21 H	Aan81111 Sequence Aaq76107 Cucumber Aaq76106 Cucumber Aaq76108 Cucumber Aaq76108 Cucumber Aaq03641 Cucumber Abl58209 Agrobacte Aan90249 Cucumber Aat72272 Cucumber Abd15071 Pseudomon Abd15266 Pseudomon Abd14864 Pseudomon Abd07120 Pseudomon	0462 C 7395 C 9545 C

## ALIGNMENTS

and the same of th

```
RESULT 1
AAA30858
ID AAA3C
XX
AC AAA3C
XX
DT 19-SH
XX
DE Ubiqu
XX
COS Nicot
XX
FT CDS
FT
FT
FT
XX
PN W020C
XX
PN 11-DI
XX
PA (MOLI
                                                                                                                                         Ubiquitin ds.
                                                                                                                          Nicot
                11-DE
                                                                                                                                                                                19-SE
                                                                                                                                                                Ubiquitin monomer C-terminal
                                                                                                                                                                                               AAA30858;
 (MOLE
                               11-DEC-1998;
                                               2-JUN-2000.
                                                               0
                                                                                                                                                                                                               0
                                                                                                                                                                               P-2000
                                                                                                                                                                                                               858 standard;
                                                                                                                          iana tabacum.
                7-1998;
                                                               )36129-A1
 INST MOLECULAR AGROBIOLOGY.
                                                                                                                                                 monomer;
                                                                                                                                                                                (first
                98WO-SG000103.
                                98WO-SG000103
                                                                           6. .47
/*tag= a
/product=
/partial
                                                                                                          Location/Qualifiers
                                                                                                                                                                                                               DNA;
                                                                                                                                                 protein production;
                                                                                                                                                                                entry)
                                                                                                                                                                                                               53 BP.
                                                                                 "Ubiquitin_monomer
                                                                                                                                                                fragment
                                                                                                                                                                coding sequence.
                                                                                                                                                 plant
                                                                                   _fragment"
                                                                                                                                                 cell; ubiquitin promoter;
```

Жe

on

```
Alignment
Pred. No.:
Score:
ID
XX
                                                                                                                                                                                                                      RESULT :
                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                       This sequence encodes the C-terminal fragment of a ubiquitin monomer. Invention relates to a method for enhancing production of a desired protein in a plant or plant cell by inserting a nucleic acid (NA) encoding a ubiquitin monomer upstream of a NA encoding the desired protein, where the fusion construct encodes a fusion protein and expression is not controlled by the ubiquitin promoter. The invention also relates to a NA acid vector a NA vector able to transform a plant cell, that comprises NA encoding a fusion protein having a ubiquitin monomer linked to a protein of interest and further, where expression the fusion construct is not under control of a ubiquitin promoter. The construct allows enhanced production of the desired protein in plants oplant cells
                                                                                  960M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fang
                                                                                                       Key
CDS
                                                                                                                                                              Coat
                                                                                                                                                                            16-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Production of desubiquitin monomer desired protein.
                                                      07
                                        w
                                                                    11-JUL-
                                                                                                                                         Coat protein; resistance; s
                                                                                                                                                                                                 AAT34666
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-4316
P-PSDB; AAY902
             Boeshore
                                                                                                                            Cucumbe
                                                                                                                                                                                                               AAT34666
                                        0
                                                                                                                                                                                                                                                                       857-
                                                                                                                                                                                                                                                                                                                                           equence
                                                                                                                                                                                                                       ON
                           SGR-)
                                                                                                                                                                            DEC-1
                                         PEC-
                                                                                  21018-A1
                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
                                                                                                                                                                                                                                                                      841-4
                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                    1996
                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ion
                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                      \vdash
                                        .994;
                                                                                                                                                                             99
                          ASGROW
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page
             ÄĽ,
                                                                                                                            moga
                                                      95
                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \Xi_{\mathbf{L}}
                                                                                                                                                                             \sigma \omega
                                                                                                                                                                                                               tandard
                                                                                                                                                                                                                                                                                                                              Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0f
                                                                                                                                                                                                                                                                      (1-14)
                                                                                                                                                                                                                                                                                                                                           B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                           Li C
                                                                                                                                                               О
Н
                                                                                                                                                                            (revised)
(first en
                                                                                                                                          \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                CP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55
55
             Mcmaster
                           S
                                                      9
                                                                                                                                                               the
                                                                                                Location/Qualifiers
3. .659
/*tag= a
                                                                                                                           virus;
                                                                                                                                                                                                                                                                                                                                            15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chen
                           EED
                                         4US
                                                      5WO-US00723
                                                                                            /*tag
                                                                                                                                                                                                               ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ired prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                  42pp;
                                                                                                                                                                                                                                                                      ×
                                                                                                                                                cucumber
                                                                                                                                                                                                                                                                                    4.38e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                               DNA;
                                                                                                                                                                                                                                                                                                                                            P
                           ၀
                                                                                                                                                               V34
                                                                                                                                                                                                                                                                       AAA30858
                                                                                                                                                                             entry)
                                        00367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                            14
             JR,
                                                                                                                            90
                                                                                                                                                               38
                                                                                                                                                                                                               771
                                                                                                                                                                                                                                                                                                                                                                                                                                                   English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequend
                                                                                                                            rain
                                                                                                                                                                                                                                                                                                                                            Ç
                                                                                                                                                               rain
                                                                                                                                                 mosaic
                                                                                                                                                                                                               ВP
                                                                                                                                                                                                                                                                                                                                            73
             Tricoli
                                                                                                                                                                                                                                                                       1-
                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                μ̈́
                                                                                                                                                               О
                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C
O
                                                                                                                                                                                                                                                                       53)
                                                                                                                                                               Ιħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              plant
                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       plants or
upstream
                                                                                                                                                 <u>ځ</u>.
                                                                                                                                                                                                                                                                                                                                            ב
                                                                                                                                                               cucumber
            MG,
                                                                                                                                                rus;
                                                                                                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                CMV;
             Reynolds
                                                                                                                                                                                                                                                                                                                                           u;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         plant
of the
                                                                                                                                                               mosaic
                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                V27;
                                                                                                                                                                                                                                                                                                                                            Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hе
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       celle
e gene
                                                                                                                                                                                                                                                                                     000043
             JF
                                                                                                                                                V33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       by linking encoding t
             Carney
                                                                                                                                                 V34;
                                                                                                                                                A35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ig a
                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                      The
                                                                                                                                                                                                                                                                                                                                                                               H
```

```
Score:
Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                        SXCCCCCXXXX PFFX DR
                                                                                                                                                                                                                                                                                                   RES
                                                                                                                                                                                                                                                                                                                                               US-
                                                                                                                                                                                                                                                                                                                                                                                                Alig
                                                                                                                                                                                                                                                                                    SULT 3
F34664
AAT3
                                                                                                                                                                                                                                                                                                                                                                                                 gnment
d. No.
                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                   ent Similarity:
Local Similarity:
Y Match:
                     New is plants resist
                                                                                                                                                                                                                                                                                                                                                                                                                                      quas)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       plant:
                                                                                                                                                                                                            Coat I
                                                                                                                                                                                                                                                16-0C7
02-DEC
                                                                                                                                                                                                                                                                      AAT34
                                                                                                                                                                                                                                                                                                                                                                                                                                            Coat I mosaic infect known quash,
        Claim
                                                   MPI
                                                                                                                                                 W0962
                                                                                                                                                                        Key
CDS
                                                                                                                                                                                                                                  Coat
                                                                                                                                                                                                                                                                                                                                                                                                                      Seque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-P
Idm
                                                                                                                     07-
                                                                        Boeshore ML,
                                                                                        (ASGR
                                                                                                                                                                                                                                                                                                                                               -85
                                                                                                                                                                                              Cucum
                                                                                                       0
                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SD
                                                    ⇔
                                                                                                       BE
                                                                                                                                   JU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      μ.
                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                    Ö
                                                                                                                                                                                                                                                                                                                                                                                                 ..
                                                                                                                                                                                                                                                 T-2003
C-1996
                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                     protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based of CP sequences. The genes may be used for producing plants such as , cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                     solated cucumber mosaic virus coat protein DNA - used s, partic. of the family Cucurbitaceae or Solanaceae, tant to infection.
                                                                                                                                                                                                                                                                       664;
                                                                                                                                                                                                                                                                                                                                                                                                          Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       solated cucumber mosaic virus coat protein DNA - used to produces, partic. of the family Cucurbitaceae or Solanaceae, which are tant to infection.
                                                   1996-333993/33.
B; AAR98893.
                                                                                                                                                  1018-A1.
                                                                                                                                                                                                                                                                                     664
                                                                                                                                                                                                                                                                                                                                                                                                                         nce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1996-333993/33.
B; AAR98895.
                                                                                        -) ASGROW
                                                                                                                     N-1995;
                                                                                                                                                                                              ber mosaic
                                                                                                                                                                                                            tance;
                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                               841-4
        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24; Fig 3; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                         771
       Fig
                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                               (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                       B₽;
       !
                                                                                                                                                                                                                                                 (revised)
(first en
                                                                                                                                                                                                                                  of the
                                                                        Mcmaster
                                                                                                                                                                                                                   CP; cucumber mosaic virus; CMV;
                                                                                        CHES
                                                                                                                     95WO-US007234.
       gopp;
                                                                                                                                                                                              virus; strain V27.
                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                        176 A; 199 C;
                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                                                            4.67e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                                        . 659
                                                                                        <u>င</u>
                                                                                                                                                                                                                                  V27 strain of cucumber mosaic
                                                                                                                                                                                                                                                                                                                                               AAT34666
                                                                                                                                                                                                                                                 entry)
       English
                                                                         JR,
                                                                                                                                                                                                                                                                                      772
                                                                                                                                                                                                                                                                                      8만.
                                                                         Tricoli
                                                                                                                                                                                                                                                                                                                                                (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                        183 G;
                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                         DM,
                                                                                                                                                                                                                                                                                                                                                                                                                         213
                                                                         Reynolds
                                                                                                                                                                                                                                                                                                                                                                                                                         T;
                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                   V27;
                                                                                                                                                                                                                                                                                                                                                                                                                       Ġ,
                                                                                                                                                                                                                                                                                                                                                              771
14
0
0
                                                                         JF,
                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                   virus
                                                                                                                                                                                                                                                                                                                                                                                                                         Other;
                                                                         Carney
                                                                                                                                                                                                                   V34; A35
                              which are
```

```
Alignmen
Pred. No
Score:
Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                                                                                                                                                                                RESULT
AAT172
-Sn
                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Coat protein (CP) genes of mosaic virus (CMV) were is infected plant tissue by I known CP sequences. The grant cucumber, peppers infection. (Updated on 16-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ent Similari
Local Simil
                                                                                      plants
resist
                                                                                                                      WPI;
                                                                                                                                                                                                                                                    Key
CDS
                                                                                                                                                                                                                                                                                          Coat
                Coat protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber mosaic virus (CMV) were isolated. The CMV CP genes were isolated from infected plant tissue by PCR amplification of cDNA using primers based known CP sequences. The genes may be used for producing plants such as quash, cucumber, peppers and tomatoes which are resistant to CMV infection. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                  Coat
                                                                                                                                                                                                                                                                                                                                  16-OCT-2003
02-DEC-1996
                                                                                                      New
Sequence
                                                                       Disclosure;
                                                                                                                                                                             30-DEC-
                                                                                                                                                                                             07-JUN-
                                                                                                                                                                                                            11-JUL-
                                                                                                                                                                                                                             W09621
                                                                                                                                                                                                                                                                           Cucumber
                                                                                                                                                                                                                                                                                                                                                          AAT1725
                                                                                                                                                                                                                                                                                                                                                                         AAT172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                              Boeshore
                                                                                                                                                             (ASGR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                        857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.
                                                                                                                                                                                                                                                                                                                                                                                 បា
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      equence
                                                                                                                                                                                                                                                                                                                                                                                  4.0
                                                                                                                     T; 1996-333993/33
PSDB; AAR93803.
                                                                                                                                                                                                                                                                                          at protein;
sistance; ss
                                                                                      nts, partic. of the istant to infection
                                                                                                      isolated
                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores
                                                                                                                                                                                                                                                                                                                                                                          U
                                                                                                                                                                                                                             018-A1
                                                                                                                                                                             1994;
                                                                                                                                                                                             1995;
                                                                                                                                                                                                             1996
                                                                                                                                                                                                                                                                                                                                                                          Ō
                                                                                                                                                                                                                                                                                                                                                                                                        w
                                                                                                                                                                                                                                                                                                                                                                                                                        \mathbf{\mu}
                                                                                                                                                             ASGROW
                                                                                                                                                                                                                                                                                                                                                                                                                                        -4
                                                                                                                                             Æ,
                                                                                                                                                                                                                                                                                                                                                                                                                   MetAs
                                                                                                                                                                                                                                                                                                                                                                                                        ATGGACAAATCTGAATCAACCAGTGCTGGTCGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       772
                                                                                                                                                                                                                                                                           mosaic
                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lty:
larity:
                                                                                                                                                                                                                                                                                                                                                                                                                                        \widehat{\mathbf{L}}
                                                                      Fig
                                                                                                                                                                                                                                                                                           88
                                                                                                     cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP;
 ₽P;
                                                                                                                                                                                                                                                                                                                   Off.
                                                                                                                                                                                                                                                                                                                                  (revise (first
                                                                                                                                                                                                                                                                                                  CP;
                                                                                                                                                                                                                                                                                                                                                                                                                \___\
\__\d___
                                                                                                                                                                                                                                                                                                                                                                                                                                        14)
                                                                                                                                             Mcmast
                                                                                                                                                             SEED
                                                                                                                                                                             94US-
                                                                                                                                                                                             95WO-US007234
                                                                                                                                                                                                                                          Location/Qualif
3. .659
/*tag= a
                                                                      8;
                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                                                           virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       177
                                                                                                                                                                                                                                                                                                                                                                                                                       -8
-8
                                                                                                                                                                                                                                                                                                                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                   cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.68e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                         Œ
                                                                                                                                                                                                                                                                                                                                                                                                                 erGluSerThrS
  ຫ
                                                                       80pp;
                                                                                                                                                             ၀
                                                                                                                                                                                                                                                                                                                  A35
                                                                                                                                                                                                                                                                                                                                                                                                                                        AAT34664
                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                          <u>0</u>
                                                                                                                                                                            00367789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;
                                                                                               mosaic ve family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of the V27, V33, V34 and A35 strain of cucumber isolated. The CMV CP genes were isolated from by PCR amplification of cDNA using primers based genes may be used for producing plants such as and tomatoes which are resistant to CMV 16-OCT-2003 to standardise OS field)
                                                                                                                                             JR,
                                                                                                                                                                                                                                                                           strain
                                                                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202
                                                                                                                                                                                                                                                                                                                                                                         772
                                                                       English
                                                                                                                                                                                                                                                                                                                   rain
                                                                                                                                                                                                                                                                                                   mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ç
                                                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                              Tricoli
  Ω
                                                                                              virus coat protein DNA - used
/ Cucurbitaceae or Solanaceae,
                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-
                                                                                                                                                                                                                                                                           A35
                                                                                                                                                                                                                                                            fiers
                                                                                                                                                                                                                                                                                                                  of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                erAlaGlyArgAsnArgArg
||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                        772)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
  ហ
                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                   cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ģ
                                                                                                                                             DM,
                                                                                                                                                                                                                                                                                                   : Bur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       211
  211
                                                                                                                                                                                                                                                                                                   CMV;
                                                                                                                                              Reynolds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                   mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                         CGTCGG
                                                                                                                                                                                                                                                                                                   V27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     u;
 Ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        772
14
0
0
                                                                                                                                             JF,
                                                                                                                                                                                                                                                                                                                   virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                   V33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Other;
                                                                                                                                                                                                                                                                                                                                                                                                         44
                                                                                                                                                                                                                                                                                                                                                                                                                        14
                                                                                                      used
                                                                                                                                              Carney
                                                                                                                                                                                                                                                                                                  V34;
                                                                                              to produce which are
                                         9
```

N

A

201

18

Ω •

H

0

0

Othe

-60-Sn

-857-

841-4

(1-14)

×

**AAT34665** 

(1-773)

9

S

```
Alignment
Pred. No.:
Score:
Percent Si
Best Local
Query Matc
                             Alignment
Pred. No.:
Score:
 Percent Sim
Best Local
Query Match
DB:
                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
AAT34665
ID AAT34
                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-
                                                                        Coat p
mosaic
infect
known
quash,
infect
                                                                                                                                          New in plant; resis
                                                                                                                                                                                                                                                                                                                                                                   16-OCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ent Similarity:
Local Similarity:
Match:
                                                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                               Coat
resi
                                                                                                                            Claim
                                                                                                                                                                                                                                                                                           Key
CDS
                                                                                                                                                                                                                                                                                                                                                     Coat
                                                                                                                                                                                                                                                                                                                                                                                          AAT3
                                                          Sequence
                                                                                                                                                                                            Boeshore ML,
                                                                                                                                                                                                            (ASGR
                                                                                                                                                                                                                          30-DE
                                                                                                                                                                                                                                                       11-
                                                                                                                                                                                                                                         07-JUN-1995;
                                                                                                                                                                                                                                                                      W0962
                                                                                                                                                                                                                                                                                                                 Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  857-
        Similarity:
cal Similarity:
fatch:
                                                                                                                                                                                                                                                       J.
                                                                                                                                                                                                                                                                                                                               œ
                                     ••
                                                                                                                                                                                                                                                                                                                                                                                          665;
                                                                       protein (CP) genes of the V27, V33, V34 and A35 strain of cucumber c virus (CMV) were isolated. The CMV CP genes were isolated from ted plant tissue by PCR amplification of cDNA using primers based (CP sequences. The genes may be used for producing plants such as cucumber, peppers and tomatoes which are resistant to CMV tion. (Updated on 16-OCT-2003 to standardise OS field)
                                                                                                                                          solated cucumber mosaic virus coat protein DNA - used s, partic. of the family Cucurbitaceae or Solanaceae, tant to infection.
                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                    T-2003
C-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores
                                                                                                                                                                                                                                                                                                                               tance;
                                                                                                                                                                       1996-333993/33.
B; AAR98894.
                                                                                                                                                                                                                          2-1994;
                                                                                                                                                                                                                                                        L-1996
                                                                                                                                                                                                                                                                      1018-A1
                                                                                                                                                                                                            -) ASGROW
                                                                                                                                                                                                                                                                                                                 ber mosaic
                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                       rotein;
                                                                                                                                                                                                                                                                                                                                                                                                        Q
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41-
                                              cores
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ü
                                                           773
                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                            Fig 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-14)
                                                                                                                                                                                                                                                                                                                               88.
                                                                                                                                                                                                                                                                                                                                                                   (revised)
(first en
                                                           BP; 175
                                                                                                                                                                                                                                                                                                                                                      of the
                                                                                                                                                                                                                                                                                                                                      CP;
                                                                                                                                                                                             Mcmaster
                                                                                                                                                                                                            SEED
                                                                                                                                                                                                                          94US-00367789.
                                                                                                                                                                                                                                         95WO-US007234.
                                                                                                                                                                                                                                                                                                                virus;
                                                                                                                                                                                                                                                                                    Location/Qualifiers
3. .659
/*tag= a
                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                           90pp;
                                                                                                                                                                                                                                                                                                                                       cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.68e-05
14.00
100.00%
100.00%
100.00%
 4.68e-05
14.00
100.00%
100.00%
100.00%
2
                                                                                                                                                                                                                                                                                                                                                                                                        DNA;
                                                                                                                                                                                                                                                                                                                                                      V33 strain of cucumber mosaic virus
                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT17259
                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                           A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68e-05
                                                                                                                           English.
                                                                                                                                                                                             JR,
                                                                                                                                                                                                                                                                                                                  strain
                                                                                                                                                                                                                                                                                                                                                                                                        773 BP
                                                           200 C;
                                                                                                                                                                                                                                                                                                                                       mosaic
                                                                                                                                                                                             Tricoli DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-772)
                                                                                                                                                                                                                                                                                                                  V33
                                                           185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
Gaps:
               Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                       virus;
                               Matches:
          Indels
                                     Length:
                                                           <u>ი</u>
                                                            213
                                                                                                                                                                                                                                                                                                                                       CMV;
                                                                                                                                                                                              Reynolds JF,
                                                           H
                                                            0
                                                                                                                                                                                                                                                                                                                                       V27;
                                                           Ċ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 772
14
0
0
   773
14
0
0
                                                            0
                                                                                                                                                                                                                                                                                                                                       V33;
                                                                                                                                                                                                                                                                                                                                                                                                                                      44
                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                            Other;
                                                                                                                                                       used
                                                                                                                                                                                              Carney
                                                                                                                                                                                                                                                                                                                                        V34;
                                                                                                                                                  to produce which are
                                                                                                                                                                                                                                                                                                                                        A35
```

```
RESULT 6
AAQ10461
ID AAQ1046
XX AAQ1046
XX AAQ1046
XX 27-AUG-
DT 25-MAR-
DT 16-APR-
XX CMV; re
XX CLumbe
XX FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
CC The ger
CC The The ger
CC The ger
C
ţ,
Ça
                                                                                             Alignment
Pred. No.:
Score:
Percent Si
Best Local
Query Matc
DB:
                                        Ş
                                                                    0S-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   $
                                                                                                           ent Simil
Local Si
y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                      Transgenic culture on resistant t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 199
                                                                                                                                                                                                                                    The gene was isolated from a plasmid (pUC18) containing DNA complementate to RNA 3 of the virulent strain FNY, isolated in New York on infected melons. The sequence includes a leader sequence, coding region and 3' not coding region. The leader sequence is the same length as that of the Japanese Y strain of CMV. Transgenic melon plantlets containing the sequence introduced via an Agrobacterium tumefaciens intermediate are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10462. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-AUG-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EP412912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAQ1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (BIOC-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-AUG-
25-MAR-
16-APR-
                                                                                                                                                                                                            equence
                                                                    ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEB-1991
                                                                    \boldsymbol{\omega}
                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          resistance;
                                                                    41
                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                          ilarity:
Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .2003
.2003
.1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91-046027/07
AAR10652.
             Ç
                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (L)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BIOCEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ā.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MetAspLysSe
          MetA
                                                                                                                                                                                                             976
                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eta.
                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                            Page
                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                        melon plantlets prodn. f
specific medium for new
to cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bentahar
                                                                    1-
                               — ≱
— 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ndard;
             AspLysSe
|||||||
|ACAAAT(
                                                                                                                                                                                                           ₿P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
(revised)
(first en
                                                                    14)
                                                                                                                                                                                                                                                                                                                                                                                             17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90EP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89FR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location,
75. .731
/*tag= &
/product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        capsid
                                                                                                                                                                                                             N
                                   − છે
                                                                    ×
                                                                                             5.75e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerGluSerThrSe
|||||||||||||
|CTGAATCAACCAG
             44pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA;
                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       О
Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                    AAQ10461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                00010848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           004022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tion/Qualif
.731
                                                                                                                                                                                                           A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cucumber
           Noe1
                                                                                                                                                                                                             24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein;
                                                                                                                                                                                                                                                                                                                                                                                               French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                           \ddot{\mathbf{G}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ш
                                                                    -1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     שׁ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            stra
                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     įe:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mosaic
                                                                    976)
                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucumi
                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     H
                                                                                                                                                                                                          Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                      rom t
                                                                                                                                                                                                                                                                                                                                                                                                                                        ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FNY
                                                                                                                                                                                                             273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J;
                                                                                                                                                                                                                                                                                                                                                                                                                                    ransformed shoot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Buz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            melo;
                                                                                                                                                                                                          Ŧ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bid
                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C
                                                                                                                                                                                                            Ų;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein"
                                                                                                000000
                                                                                                                                                       4
                                                                                                                                                                                                              O
                                                                                                                                                                    g
                                                                                                                                                                                                             Othe:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FNY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                        4
             ത
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ca
                                                                                                                                                                                                                                                                                                                                                                                                                                     by tesp
                                                                                                                                                                                                                                                                                                                                                   complementary infected
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Œ
                                                                                                                                                                                                                                                                                                                                        non
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
```

Query DB:

ent Similarity:
Local Similarity:
Match:

밁

**54** 

RESULT

Θ

S

μ

95

SD

-60

85

7-

41-

(1-14)

×

AAQ10462

(1-1007)

```
Score.
Percent
Best Loc
                                                                                                                                                           Alig
                                                                                                    gnment
d. No.
                                                                                                                                                                                               The gene was isolated from the virulent French strain 117F of CMV. Tomate plantlets at the 2-leaf stage were infected with CMV strain 117F. 15 days post-infection, the virus was purified from the infected leaves and cDNA was synthesised from RNAs 1,2,3 and 4. After purification and selection by standard techniques, cDNA complementary to RNA 4 was found to encode the capsid protein. It was recloned into "Blue scribe" plasmids and sequenced. Transgenic melon plantlets containing the sequence introduced via an Agrobacterium tumefaciens intermediate are cultured as shoots in special media. The transformed melon plants are resistant to CMV. See also AAQ10461. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct PI field.) (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Transgenic culture on culture on culture on culture on culture on culture on culture of the cult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-AUG-2003
25-MAR-2003
16-APR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T 7
)462
AAQ104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CMV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-AUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAQ10
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-AUG-1990;
                                                                                                                                                              Sequence 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Debot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .3 - FEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SDI
                                                                                                       ••
                                                                                                                           Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         h
M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genic melon plantlets prodn. from transformed shoots - re on specific medium for new transformed plants etc., tant to cucumber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           462;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3-1991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       912-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               esistance; capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   991-046027/07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein gene of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR10653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BIOCEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bentahar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
(revised)
(first en
                                                                                                                                                               B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90EP-00402282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54. .710
/*tag= a
/product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                  227
    5.91e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           44pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        00010848
                                                                                                                                                                 Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Noe1
                                                                                                                                                                  259
                                                                                                                                                                                                                                                                                                                                                                                                                                                           French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZWO.
                                                                                                                                                              ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             strain
                                                                                                                                                                  247
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cucumie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perret
                                                                                                                                                               <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                117F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Virus
                                                                                                                                                                  274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ċ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 melo;
                                                                                                                                                                년
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strain
                                                                                                                                                                  0
                                                                                                                                                                  Ų;
      1007
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein"
                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117F
                                                                                                                                                                  Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by two=stage esp.
```

```
AAQ67395
AAQ6
XX
AAQ6
XX
AAQ6
XX
AAQ6
XX
AAQ6
XX
AAQ6
XX
Cau
XX
Cau
XX
XX
PPH Ke
PPH XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH Z2
XX
PPH X2
PPH Z2
XX
P
                                                                                                                                                                                                                              rercent Similarity:
Best Local Similarity:
Query Match:
DB:
ID XX AC AC DT
                                                                                                                                                                                                                                                                         Pred. No
Score:
Percent
                                                                                                                                                                                                                                                                                                          Alignment Pred. No.:
                                                                                          RESULT
AAT9954
                                                                                                                                       8
                                                                                                                                                                    S
                                                                                                                                                                                                   S
                                                                                                                                                                                                   9
                                                                          T 9
9545/c
AAT995
                                                                                                                                                                                                                                                                                                                                                                                The RNA encoding the capsid protein of cauliflower mosaic virus targetted by a nucleic acid sequence called a "polyribozyme". The polyribozyme has endoribonuclease activity and is able to inactivity encoding the viral capsid protein. The polyribozyme comprise several catalytic regions derived from ribozymes and confers compresistance to virus. See AAQ67391-94. (Updated on 25-MAR-2003 to PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cauli
 25-MAR-2003
21-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ6739
                                             AAT99545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lenee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-SEP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FR2701960-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cauliflower m
polyribozyme;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cauliflower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAQ67395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GENE-)
                                                                                                                                                                                                   85
                                                                                                                                                                                                                                                                                                                                                     equence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5-MAR-2003
2-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w polyribozyme contg.
quence - can inactivat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEB-
                                                                                                                                                                                                  7-841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEB-1993;
                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                flower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            flower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                           45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                       ហ
                                                                                                                                                                                                                                                                                                                          cores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1994
                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94-28
AAR5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENE
                                                                                                                                                                                                                                                                                                                                                       1007
                                                                                                                                     standard;
                                                                           stand
                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Perez
                                                                                                                                                                                                 (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31767/35
57968.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ∄O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
(first en
 (revi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHEARS
                                                                          lard;
                                                                                                                                                                                                                                                                                                                                                      BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               saic virus;
inactivate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
54. .710
/*tag= a
/product= "Capsid p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93FR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93FR-00002269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۵,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            اد
sed)
                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                                                                                                       227
                                                                                                                                                                                                                              5.91e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            virus
                                                                          CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -00002269
                                                                                                                                                                                                 AAQ67395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALd
  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gruber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                       A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       several catalytic
te gene for viral
transgenic plants,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CIT
                                                                           1066
                                                                                                                                                                                                                                                                                                                                                       259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CMV; capsid p inactivation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      дB
                                                                                                                                                                                                                                                                                                                                                       ü
                                                                                                                                                                                                  (1-1007)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Baudot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                      247
                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                                       ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein; co
n; resistano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                       274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cregions in complementary capsid protein, esp. for prepared also DNA sequence encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ollivo
                                                                                                                                                                                                                                                                                                                                                       'n,
                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequenc
                                                                                                                                                                                                                                                                                                                                                       Ç;
                                                                                                                                                                                                                                 000011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    വ
                                                                                                                                                                                                                                                                                          007
                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                       95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
crop protection;
                                                                                                                                                                                                                                                                                                                                                                                              confers complete
MAR-2003 to corr
                                                                                                                                                                                                                                                                                                                                                       Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                               o inactivat
comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ivate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               can
                                                                                                                                                                                                                                                                                                                                                                                                     correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               рe
                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           igi
ngi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88
```

```
Alignment Pred. No. Score:
                                     Percent
Best Loc
                   Query
DB:
                                                                                              us-09-
                                                                                                               This cDNA clone of cucumber mosaic virus (CMV) RNA-3 includes domain F of the subgenomic promoter of viral RNA, the coat protein gene, its leader sequence, and the tRNA-like 3'-terminal region of RNA-3. It was prepared by amplifying a fragment of CMV cDNA-3 from clone pCR-CMVIRNA3 by PCR (see also AAT99548-49). The gene construct is introduced into a vector containing a promoter active in plant cells in antisense orientation relative to the promoter. A claimed recombinant vector comprises the plant promoter, the antisense gene construct and a terminator which is functional in the plant. In addition to CMV, viral RNA may also be used from tobacco mosaic virus and potato virus. Claimed transgenic plants have the antisense gene construct integrated into their genomes. They are resistant to viral infection. In particular, they are resistant to CMV. Within the antisense gene construct, the interfering activity of the antisense activity performed by the coat protein gene, allows production of plants having 100% resistance to CMV. (Updated on 25-MAR-2003 to correct PR field.)
                            ent Sin
Local
Y Match
                                                                                                                                                                                                                                                                                                              Preparanti:
                                                                                              Sequer
                                                                                                                                                                                                                                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              promo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Key
3'UTR
                                                                                                                                                                                                                                                                                             Claim
                                                                                                                                                                                                                                                                                                                                                                         Cellini F,
                                                                                                                                                                                                                                                                                                                                                                                            (META
                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Transgenic pl
coat protein;
                                                                                                                                                                                                                                                                                                                                                                                                                09-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                   07-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EP806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cucumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cucum
 857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ĥ
                                    imilarity:
                                                                                                                                                                                                                                                                                                                          sense
                                                                            Scores
                                                                                                                                                                                                                                                                                                                 sense gene constructs
cucumber mosaic virus
                                                                                                nce
                                                                                                                                                                                                                                                                                                                                                                                                                7-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ber
  341-4
                                                                                                                                                                                                                                                                                                                                                       L997-538620/50.
                                                                                                                                                                                                                                                                                                                                                                                             -) METAPONTUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                       7-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        per mosaic
                                                                                                                                                                                                                                                                                            ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
                                                                                                1066
                                                                                                                                                                                                                                                                                             Page
                                                                                                                                                                                                                                                                                                                         transgenic plants
(1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          plant; virus
.n; antisense
                                                                                                                                                                                                                                                                                                                                                                          Grieco
                                                                                                                                                                                                                                                                                             10;
                                                                                               BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                   97EP-00201379
                                                                                                                                                                                                                                                                                                                                                                                                                96IT-MI000927.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product= "co
956. .1029
/*tag= c
/note= "coat
1030. .1066
/*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
1. .299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *tag=
                                                                                                                                                                                                                                                                                           18pp;
×
                                                                                                299
                   6.22e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                         ; da
                                                                                                                                                                                                                                                                                                                                                                                             AGROBIOS
 AAT99545
                                                                  22e-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RNA-3 cDNA
                                                                                                Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "F sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         resistance; gene; ss.
                                                                                                                                                                                                                                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 8
                                                                                                251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "coat
                                                                                                                                                                                                                                                                                                                         s resistant containing
                                                                                                                                                                                                                                                                                                                                                                                             SCRL
                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
 (1-1066)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein"
                                                                                                273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fragment
                                    Matches:
Conservative:
Mismatches:
                  Gaps
                             Indels:
                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of.
                                                                                               G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         leader
                                                                                                                                                                                                                                                                                                                          to I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sub-genomic
                                                                                                243
                                                                                                                                                                                                                                                                                                                         RNA virus infection viral coat protein
                                                                                              ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     resistance;
                                                                                                0
                                                                                                ۲.
                   1066
14
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           promoter"
                                                                                                0
                                                                                                Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RNA virus;
                                                                                                                                                                                                                                                                                                                         - using gene, e.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CMV;
                                                                                                                                                                             are
```

8

MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg

Ď

```
RESULT 10
AAZ07505/c
ID AAZ07505
                                                                                                                                                             Alignment
Pred. No.:
Score:
        RESULT
AAN8111
ID AA
XX
                                                                                                                                                                                                       Ş
                                                            日
                                                                                                   SD
                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                     The invention relates to preparing transgente percent virus induced infections that comprises integrating an antisense gene virus induced infections that comprises integrating an antisense gene construct into the plant genome. The construct comprises: (a) an F domain of a subgenomic promoter of cucumber mosaic virus (CMV); (b) downstream from the leader sequence of a coat protein gene of CMV; (c) downstream from the leader sequence, a gene encoding a CMV coat protein gene. The method is useful for producing plants which are cost protein gene. The method is useful for producing plants which are chigher levels of resistance compared to antisense construct gives higher levels of resistance compared to antisense constructs which are capable of complementing with different domains of genomic RNA of CMV. The present sequence represents the fragment of cDNA clone of RNA-3 of CMV. This forms the antisense construct of the invention
                                                                                                                                                                                                                                                                                     rig 1
...e invention r
virus induced i.
construct into t
of a subgenomi
from the s.
CMV; (~
pr~
                                                                                                    00
                                                                                                                                                                                                                                                                                                                                                                                           Preparing anti:sense from cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Transgenic plant; CMV; promoter; co
AAN81111
                   AAN81111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US5959181-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ07505
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cellini
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (META-)
                               \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6-NOV-1999
                                                                                                  841
                                                                                                                                                                                  Scores
                                                                                                                                                                                                                                                                                                                                                                                            sense gene
                                                            φ
                                                                                                                                                                                                                                                                                                                                                                                                     sense
                                                                                                                                                                                                                                                                                                                                                                                                                                    1997-
                                                            ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ហ
                                                            O.
                                                                              \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ,
'A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METAPONTUM AGROBIOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mosaic
                                                          standard;
                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                           transgenic plants
gene constructs of
mber mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                   538620/50
                                                                                                  (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Grieco
                                                                                                                                                                                                                                                                                                                                                                        <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-00854170
                                                                                                                                                                                                                                                                                                                                                                       15pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6IT-MI000927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٠.
                                                                                                  ×
                                                                                                                      6.22e-05
14.00
100.00%
100.00%
100.00%
                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NA virus;
protein s
                                                                                                   AAZ07505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                        English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CMS)
                   1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               067
                                                                                                                                                                                                                                                                                                                                                                                                     s resistant containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCRL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RNA-3
                    ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antisense construct; c
|ene; infection; RNA-3;
                                                                                                   1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                   1067)
                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                     to I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                                                     RNA virus infection viral coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone
                                                                                                                        106
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        915
                                                                                14
                                                            915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mosaic
                                                                                                                                                                                                                                                                                                                                                                                                     - using gene, e.
                                                                                                                                                                                                                                                                                                                                                                                                     ά
```

```
Best I
Query
DB:
                                                                                                                                                         AAQ7
                                                                                                                                                                                                                                                                                                                                                                                   Score:
 XXXXXXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SXCCCCCCXXXTTXRRXTXPXPRRXXXXTTTTXXXXXXXXX
                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                        Sn
                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                  Percent
                                                                                                                                                                                                                                                                                                                                                                                                                  ignment
                                                                                                                                                                                                                                                                                        - 60
                                                                                                                                                                            σ<sub>1</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                natura
DNA, i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequer
                                                                                                                                                                                                                                                                                                                                    ent Similarity:
Local Similarity:
/ Match:
Cucumb
virus
                                                                                                                           AAQ76
                                                                                                                                                         AAQ76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-FEE
25-FEE
18-FEE
                                                                             25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 also AAN81110. (Updated 25-MAR-2003 to correct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-FE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EP279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAF
12-NOV
                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TAKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synth
                                              Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cucumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page ?;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Furus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                   No.
                                                                                                                                                                            12
)7
                                                                                                                                                                                                                                                                                        Û
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B-1987;
B-1987;
B-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R-2003
V-1990
                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA is produced on screening of a plasmid library and is used to form plant cells which subsequently produce the coat prot- ein of ber mosaic virus (CMV) strain Y. This protein is not synthesised in al plant cells. The resistance to CMV infect- ion, provided by the is shown in plant cells and redifferent- iated plant bodies. See AAN81110. (Updated on 25-MAR-2003 to correct PR field.) (Updated on
ber mosaic v resistance;
                                                                                                                            107;
                                                                                                                                                            107
                                                                                                                                                                                                                          418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oding for the coat protein of cucumber mosaic virus roducing plants resistant to cucumber mosaic virus reducing plants resistant reducing plants resistant reducing reducing plants resistant reducing reducing plants resistant reducing 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1988-236708/34.
B; AAP80509.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           awa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nce
                                                 per mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  etic.
                                                                                                                                                                                                                                                                                        141-4
                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAKEDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contg.
                                                                                                                                                          standard;
                                                                                                                                                                                                                        (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
(first en
                                                                             (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Onda H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87JP-00038288.
87JP-00043443.
88JP-00035809.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
418. .1074
/*tag= a
/label= cucumber mos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88EP-00102322
virus; tomato mosaic .
;; disease resistance;
                                                 virus RNA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CMV strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virus; plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                   306
                                                                                                                                                                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                                      7.81e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                            DNA;
                                                                              entry)
                                                                                                                                                                                                                                                                                        AAN81111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Komiya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   342
                                                                                                                                                            696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĸ
                                             chimera encoding RNase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               viral
                                                                                                                                                              BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç
                                                                                                                                                                                                                                                                                        (1-1379)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                    333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mosaic
                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                resistance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ი</u>
virus; minus-strand
; transgenic plant; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                    398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    virus-Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ŧ;
                                                                                                                                                                                                                                                                                                                                                                     ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ü,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     coat
                                                                                                                                                                                                                                                                                                                       1379
14
0
0
0
                                                 T1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                           459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s strain Y infection.
  cross
protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               uged
```

```
Alignmen
Pred. No
Score:
Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                        $
                                                                                                                                                    us-
                                                                                                                         8
                                                                                                                                                     9
virus resistance; disease r
hypersensitive response; cr
Lycopersicon esculentum; to
                                                                                                                                                                        ent Similarity:
Local Similarit
y Match:
                                                                                                                                                                                                                                                         A chimer protein T1, havi
                                                                                                                                                                                                                                                                                                  DNA constr
encodes RN
eliciting
                                                                                                                                                                                                                                      sense RNA invading tobacco,
                                                                                                    T 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hyperso
Lycopes
cell is
                                                                                                                                                                                                                                                                                                                                P-P
                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
CDS
                                                                               AAQ7610
                                                                                                                                                                                                                                                                                                                                                    De
                                                                                                                                                                                                                                                                                                                                                                 (SANO
(SANO
(SANO
                                              Cucumber
                                                                                              AAQ76106
                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                             04-JUN-
                                                                                                                                                                                                                                                                                                                                                                                                           03-JUN-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                         22-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9429464-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cucumb
                                                                                                                                                                                                    No.
                                                           25-MAR-
                                                                                                                                                     85
                                                                                                                                                                                                           ent
                                                                                                                                                                                                                        equence
                                                                                                                                                                                                                                                                                                                               PSDB; 199
                                                                                                                                                                                                                                                                         chimeric
                                                                                                                                                                                                                                                                                                                                                    Haan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ersensitive response;
opersicon esculentum;
l inhibitory protein;
                                                                                                                                                                                                                                                        having th
                                                                                                                                                    7-841
                                                                                                                                                                                                                                                                                                          constructs for codes RNA that
                                                                                                                                                                                                           S
                                                                                                                         733
                                                                                                                                                                                                                                                    RNA
                                                                                                                                                                                                           core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      er
                                                          ·2003
·1995
                                                                                                                                                                                                                                                                                                                                                                                             1993
                                                                                                                                                                                                                                                                                                                              95-036490/05.
AAR67754.
                                                                                                                                                                                                                                                                                                                                                                 SANDOZ
SANDOZ
SANDOZ
                                                                                                                                                                                                                                                                                                                                                    PT;
                                                                                                                                                                                                                         1696
                                                                                                                                                                                                                                             virus,
                                                                                                                                                                                                                                                                                      Page
                                              mosaic
                                                                                             standard;
                                                                                                                        tomato.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mosaic
                                                                                                                                                    4
                                                                                                                                                                                                                                     cucumber mosaic virus RNA-3 (given in AAQ76107) has the sene replaced by a gene encoding a cell inhibitory protein, the sequence given in AAR67754. The construct elicits a that interacts with the RNA-dependent RNA-polymerase of avirus, thus conferring virus-resistance on a host plant, ecomato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                    agent
                                                                                                                                                                                                           Ø
                                                                                                                                                    (1-14)
                                                           (revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                 Z LTD.
Z PATENT GMBH.
Z-ERFINDUNGEN
                                                                                                                                                                                                                         B₽;
                                                                                                                                                                                                                                                                                       31-
                                                                                                                                                                               ty:
                                                                                                                                                                                                                                                                                                          for imparting pathogen, t interacts with viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
123. .437
/*tag= a
/product= "RNasa יוד
                                                                                                                                                                                                                                                                                                                                                                                             93GB-00011593
                                                                                                                                                                                                                                                                                                                                                                                                           94WO-EP001817
                                              virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                   product=
                                                                                                                                                                                                                        387
                                                                                                                                                   ×
                                                                                                                                                                9.38e-05
14.00
100.00%
100.00%
100.00%
                                                                                              DNA;
                                                                                                                                                   AAQ76107
                                                          entry)
                                                                                                                                                                                                                                                                                    50pp;
                                              RNA-3
                                                                                                                                                                                                                         ₽,
                                tomato
                                                                                              \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  crop improv
tobacco; Ni
TOMV; CMV;
          mato mosaic virus; minus-
presistance; transgenic proprovement; tomato;
tobacco; Nicotiana tabacu
                                                                                                                                                                                                                         413
                                                                                              Θ
                                                                                              09
                                                                                                                                                                                                                                                                                                                                                                  VERW
                                                                                                                                                                                                                                                                                     English.
                                              chimera
                                                                                                                                                                                                                         Ç
                                                                                              Ħ
                                                                                                                                                    (1-1696)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               improvement
                                                                                                                                                                                                                                                                                                                                                                  GES
                                                                                                                                                                                                                         389
                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nicotiana
                                             encoding
                                                                                                                                                                                                                         ດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88.
                                                                                                                                                                                                                                                                                                          RNA p
                                                                                                                                                                                                                         v
                                                                                                                                                                                                                         07
                                                                                                                                                                                                                                                                                                          polymerase to generate
                                                                                                                                                                                                                        Ŧ,
            tabacum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tabacum;
                                              TOMV
                                                                                                                                                                                                                         0
                                                                                                                                                                                                                        Ų;
                        s-strand plant; c
                                                                                                                                                                  000011
                                              CP
                                                                                                                                                                                             696
                                                                                                                                                                                                                         0
            coat
                                                                                                                                                                                                                         Other;
                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNase
                         cross
                                RNA
          protei
                        protection;
                                                                                                                                                                                                                                                          in, RNase
a minus-
                                                                                                                                                                                                                                                                                                          plants
an
                                                                                                                                                                                                                                             e.g.
                                                                                                                                                                                                                                                                         coat
            CP
```

```
RESULT 1
AAQ76108
ID AAC
XX AAC
AC AAC
XX
AC AAC
XX
AC AAC
XX
DT 25-
DT 20-
XX
Cuc
XX
KW Cuc
KW Vir
KW hyr
KW Lyc
KW CMV
                                                                                                                                                                                                        Percent Sim
Best Local
Query Match
                                                                                                                                                                                                                                 Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                -60-Sn
Cucumk
virus
hypers
Lycops
CMV; s
                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1
P-PSDE
                                                                                                                                                                                                                                                                                    A chimeric cucumber mosaic virus RNA-3 (given in AAQ76106) codes for the coat protein (CP) of tomato mosaic virus (AAR67752) as well as its own CP (AAR67753). The construct elicits minus-sense RNA that interacts with the RNA-dependent RNA-polymerase of an invading virus, thus conferring virus-resistance on a host plant, e.g. tobacco, tomato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                encodo
elici
                                                                                            AAQ76
                                                                                                            AAQ76
                                                                                                                                                                                                                                                                                                                                                                                DNA CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-DE
                                                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                          (SANO
(SANO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W0942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
                                                                   25-MAR-2003
20-JUL-1995
                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                           De
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
                                                    Cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-JU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03 - JUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cucum
                                                                                                                                                                                857-
                                                                                                                     )8
8
                                                                                                                                                                                                                Similarity:
al Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                           Haan PT;
                                                                                             108;
                                                                                                                                                                                                                                                    Scores
                                                                                                                                                                                                                                                                                                                                                                ting agent.
                                                                                                                                                897
                                                                                                                                                                                 841-4
        ber mosaic virus; tomato mosaic virus; minus-strand RNA; resistance; disease resistance; transgenic plant; cross sensitive response; crop improvement; tomato; eliersicon esculentum; tobacco; Nicotiana tabacum; P3O; eli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9464-A1
                                                    ber
                                                                                                              108
                                                                                                                                                                                                                                                                                                                                                                        onstructs for imparting pathogen, esp.es RNA that interacts with viral RNA po
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ¥-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2-1994
                                                                                                                                                                                                                                                                                                                                                ٠.
س
                                                                                                                                                                                                                                                                                                                                                                                                 995-036490/05; AAR67752, A
                                                                                                                                                                                                                                                                                                                                                                                                                                          SANDOZ LTD.
SANDOZ PATENT GMBH.
SANDOZ-ERFINDUNGEN
                                                                                                                                                                                                                                                                     1860
                                                    mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mosaic
                                                                                                                                               standard;
                                                                                                                                                                                 (1-14)
                                                                   (revised)
(first en
                                                                                                                                                                                                                                                                     BP;
                                                                                                                                                                                                                                                                                                                                                27-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   LTD.
PATENT GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product = "
895. .1550
/*tag = b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93GB-00011593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94WO-EP001817
                                                    virus RNA-3 chimera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
123. .600
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               product=
                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                     448
                                                                                                                                                                                                                                                                                                                                                                                                  AAR67753
                                                                                                                                                                                               0.000102
14.00
100.00%
100.00%
100.00%
                                                                                                              DNA;
                                                                                                                                                                                AAQ76106
                                                                    entry)
                                                                                                                                                                                                                                                                                                                                              50pp;
                                                                                                                                                                                                                                                                     Þ,
                                                                                                              2173
                                                                                                                                                                                                                                                                     429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZMZ
Z
                                                                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                                             VERW
                                                                                                              ЧB
                                                                                                                                                                                                                                                                     ü
                                                                                                                                                                                (1-1860)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                coat
                                                                                                                                                                                                                                                                                                                                                                                                                                             GES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         coat
                                                                                                                                                                                                                 Conservati
Mismatches
                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                                                                           Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                             MBH.
                                                   encoding ToMV P30
                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein"
                                                                                                                                                                                                                                                                     552
                                                                                                                                                                                                                                                                                                                                                                        virus, resistance
polymerase to genera
                                                                                                                                                                                                                                                                    T;
                                                                                                                                                                                                                          ive:
                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                     Ų;
                                                                                                                                                                                                 1860
14
0
0
                                                                                                                                                                                                                                                                     0
                                                                                                                                                938
                                                                                                                                                                14
                                                                                                                                                                                                                                                                     Other;
                                                                                                                                                                                                                                                                                                                                                                        generate
                           Cross
          elicitor;
                          protection;
                                                                                                                                                                                                                                                                                                                                                                        plant:
                                                                                                                                                                                                                                                                                                                                                                                  0
```

œ

```
LESULT 15
LAQ03641
LD AAQ03641 F
XX
AC AAQ03641
XX
DT 24-OCT-
DT 27-AUG
DT 25-MAF
DT 25-MAF
CCCC
XX
CC
XX
CM
XX
PN
                                                                                                                                                                                                                                                                                                                                                                                               Alignment
Pred. No.:
Score:
Percent Si
Best Local
Query Matc
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                     -Sn
                                                                                                                                                                                                                                                                                                                                                                      φ
                                                                                                                                                                                                                                                                                                                                                                                                             ent Similarity:
  Local Similarit
y Match:
                                                                                                                                                24-OCT-2003
27-AUG-2003
25-MAR-2003
07-AUG-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A chimer protein the seque that int virus, tomato.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         encode:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SANO
(SANO
(SANO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1995-03
P-PSDB; AAR6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            De
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-JUN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9429464-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cucumber
                                                                                                                                                                                                                                                                                                                                                                     857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Haan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JUN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEC
                                002185-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nimeric cucumber mosaic virus RNA-3 (given in AAQ76108) has the coatein gene replaced by a gene encoding an elicitor, ToMV P30, having sequence given in AAR67755. The construct elicits a minus-sense RN tinteracts with the RNA-dependent RNA-polymerase of an invading 19, thus conferring virus-resistance on a host plant, e.g. tobacco, ato. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       constructs for imparting pathogen, odes RNA that interacts with viral ting agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1993
                                                                                        curcurbitaceae;
                                                                                                                                                                                                                                                                                                                                       \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SANDOZ
SANDOZ
SANDOZ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         994
                                                                                                                                                                                                                                                                                                                                                                     -4
                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page
                                                             mosa
                                                                                                                                                                                                                                                                                                             mosaic
                                                                                                                                                                                                                                                     Ц
                                                                                                                     gai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ~•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٠.
                                                                                                                                                                                                                                                     andard;
                                                                                                                                                                                                                                                                                                                                                                     (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36490/05
57755.
                                                                                                                                               (revised)
(revised)
(revised)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP;
                                                                                                                                                                                                                                                                                                                                                                                                                            ָדַע
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34-35;
                                                             a
                                                                                                                     O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LTD.
PATENT GMBH.
-ERFINDUNGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94W0-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/(
123..914
/*tag= a
/product=
                                                             <u>ځ</u>.
                                                                                                                      ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3GB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       virus
                                                             .rus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                561
                                                                                                                                                                                                                                                                                                                                                                    ×
                                                                                                                      Buz
                                                                                                                                                                                                                                                                                                                                                                                               0.000117
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                     AAQ76108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  000115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP00181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   000117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;
                                                                                                                     Ω
                                                             43
                                                                                        solanaceae;
                                                                                                                                                                                                                                                     σ
                                                                                                                     CMV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 438
                                                                                                                                                                                                                                                     U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qualifi
                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "TOMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                              'n
                                                                                                                                                                                                                                                     ₿P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ç
                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                     î
                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GES
                                                                                                                     coat
                                                                                                                                                                                                                                                                                                                                                                     2173)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ü
                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                          ďв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  elici
                                                                                                                   prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 642
                                                                                                                      Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      polymerase to generate
                                                                                                                      ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .<del>.</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                          ive:
                                                                                                                                                                                                                                                                                                                                                                                                                             \omega
                                                                                                                     ene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ų;
                                                                                                                                                                                                                                                                                                                                                                                               0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                             1251
                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the coat
, having
sense RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         plant.
```

весв

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                      Alignment
Pred. No.:
Score:
Search co
Job time
                                                                                                                                      8
                                                            US-
                                                            9
                                                                                                                                    Seque
                                                                                                                                                    to con (Updat standa
                                                                                                                                                                          The
                                                                                                                                                                                           Discl
                                                                                                                                                                                                         trans:
                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                                                              Quema
                                                                                                                                                                                                                Coat
                                                                                                                                                                                                                                                                                   19-AU
                                                                                                                                                                                                                                                             (UPJO
(CORR
                                                                                                                                                                                                                                                                                                                  08-MA
                                                            Φ
      COM
                                                                                                                                                                                                                                                                                                  -AUG-1989;
                                                                                                                                                                            Ø
                                                                                                               ••
pleted:
328 sec
                                                                                                                       Scores:
                                                                                                                                                    equence encodes the coat protein of CMV-C. (Updated on 25-MAR-2003 rrect PF field.) (Updated on 25-MAR-2003 to correct PA field.) ted on 27-AUG-2003 to correct OS field.) (Updated on 24-OCT-2003 to ardise OS field)
                                                                                                                                      nce
                                                                                                                                                                                                        protein gene of cucumber mosaic virus strain WL - cloned to formed plants which are resistant to CMV viral infection.
                                                                                                                                                                                                                                              da H,
                                                            841 - 4
                                                                                                                                                                                          sure;
                                                                                                                                                                                                                                1990-099409/13.
                                                                                                                                                                                                                                                                                    3-1988;
                                                                                                                                                                                                                                                                                                                  R-1990.
                                                                                                                                                                                                                                                              CORNELL
                                                                                                                                                                                                                                                                     UPJOHN CO
                                                                                                                                      657
                             (1-14) \times AAQ03641 (1-657)
                                                                                                                                                                                          Page ?; 18pp;
                                                                                                                                                                                                                                               Slightom
                                                                                                                                     B₽;
      December
                                                                                                                                                                                                                                                                                                  89WO-US003288.
                                                                                                                                                                                                                                                                                    88US-00234404.
                                                                                                                                                                                                                                                              RES
                                                                                                                                      157
                                                                         0.00396
12.00
100.00%
100.00%
85.71%
                                                                                                                                                                                                                                                              FOUND INC.
                                                                                                                                     P
      ហ
                                                                                                                                      176
                                                                                                                                                                                          English.
      2004,
                                                                                                                                                                                                                                               Gonsalves
                                                                                                                                     Ç;
                                                                                                                                      151
        09:53:57
                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                      <u>ი</u>
                                                                                                                                                                                                                                               'n
                                                                                                                                      173
                                                                                                                                                                                                                                               Kearney
                                                                                                                                      !
                                                                                                                                      0
                                                                                                                                     Ç;
                                                                                                                                                                                                                                               <u>.</u>
                                                                           000026
                                                                                                                                      0
                                                                                                                                      Other;
                                                                                                                                                                                                                produce
```

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Command line parameters:
-MODEL=frame+ p2n.model -DEV=xlh
-Q=/cgn2 1/USPTO_spool/US09857841/runat_03122004 160613 19127/app_query.fasta-DB=EST -QFMT=fastap -SUFFIX=olip2n.rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=quality -THR_MIN=1 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto-NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US09857841_@CGN_1 1_3437_@runat_03122004_160613_19127 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run
                                                                                                                                                                                       Resul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                       \alpha \alpha \alpha
                     \alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     earched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    coring
                                                                                                                                                                       Z
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        မ္မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81Ze
      4664666
                                                                                                                                                                                    CT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              processing:
                                                                                                                                                                                                                                                      Pred. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    score
                                                                                                                                                                       S
                                                                                                                                                                       ñ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq
eq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ĥ
                                                                                                                                                                                                                                                       No. is the greater to greater to the second terms of the second te
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucle
      400000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OLIGO
Xgapop
Ygapop
Fgapop
Delop
                                                                                                                                                                    Query
Match
                                                                                                                                                                                                                                                                                                                        þį
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listing
      σσσσσσσο
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
        0447777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ü.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                  gb_est1: *
gb_est2: *
gb_htc: *
gb_est3: *
gb_est4: *
gb_est5: *
gb_est6: *
gb_gss1: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
        -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      search,
                                                                                                                                                                                                                                                                       han
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660.
600.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                     number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T
                                                                                                                                                                                                                                                  n or equal analysis c
   127
801
957
172
172
297
297
536
594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eqs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fyi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ဂ မှု
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              рg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nsing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                       0f
        488224897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>4</u>5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nCor
199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cho
                                                                                                                                                                                                                                                      results l to the of the t
   D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ch (b)
  60224
571483
574268
90465
60203
512674
68862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rame
                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \sigma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sion
                                                                                                                                                                                                                                                     predicted score of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     plus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Search (without a 249.709 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      p2n
                                                                                                                                                                                                                                                        score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \boldsymbol{\omega}
                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch time 2043
t alignments)
Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        model
                                                                                                                                                                                                                                                                                     γď
                                                                                                                                                                                                                                                       by chance the result k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   640016
 BM067231
BZ560224
BZ571483
BB574268
AW390465
AA560203
AQ612674
CE588296
CF568862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell
                                                                                                                                                                      Description
                                                                                                                                                                                                                                                       to have being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     updates/sec
                                                                                                                                                                                                                                                                     printed,
KS08001E1
pacs2-164
msh2_191.
BB574268
RC3-ST018
v120h03.r
HS_5107_B
tigr-gss-
FAMU_USDA
                                                                                                                                                                                                                                                                                          þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .. 199
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1
BM067231/c
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                       COMME
                                                                                     FEATU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _ ი ი ი ი ი ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \Omega \Omega \Omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 0 0
                                                                                                                                                                                                                                                                                         TIT
```

777777777777777777777777777777777777777	
55555555555555555555555555555555555555	111111111
1101 1201 1201 1201 1201 1201 1201 1201	L 8 1 2 M 8 6 0 0 M
100H000H000H00H000H000H000H00	<b>@@@4@</b> @@@
BU112365 CG368624 BU1147745 CC312068 CC222612 BF144190 AA784543 CD960094 CC387216 BH804848 CF096437 AZ481650 CG744011 CG541742 AW859218 AW859210 CG481915 CG483642 AW210914 AI212359 CG632317 F25547	41937 96428 74121 85182 60323 13787 13787 62379 62380
BU112365 60313 CG368624 OG2BF BU147745 AGENCO CC312068 TAM32: CC222612 CH261: BF144190 60178 AA784543 e9e073 CD945181 RDV_23 CD960094 SDA_13 CC387216 PUHHWS BH804848 100810 CF096437 QHN230 AZ481650 1M0300 CO744011 TGEST3 CG541742 OST139 AW859218 MR1-C7 AW859218 MR1-C7 CG481915 OST146 CG481915 OST146 CG483642 OST173 AW210914 u089c0 AI212359 x3f08a CG632317 OST356 F25547 HSPD1264	419370 964281 741218 851822 603235 137878 137878 225585 623795 623807
	4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6

ALIGNMENTS

11-SEP-2002

ORGANISM BM067231

N KS08001E12 KS08 Capsicum annuum cDNA, mRNA sequence.

BM067231

BM067231.1 GI:22787366

EST.

Capsicum annuum
Capsicum annuum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tr. Spermatophyta; Magnoliophyta; eudicotyledons; core eudiasterids; lamiids; Solanales; Solanaceae; Capsicum.

1 (bases 1 to 127)
Lee, S., Kim, S.-Y., Chung, Y.-H., Shin, H.-J., Goh, S.-H., n; Tracheophyta;
eudicots;

source	URES	ਸ਼ਸ਼ਮ ਰਿe e e	URNAL Un	Hu TLE Ge an	THORS Le
1127 /organism="Capsicum annuum" /mol_type="mRNA" /cultivar="Hang Keun" /db_xref="taxon:4072"	High quality sequence stop: 127. Location/Qualifiers	Korea Research Institute of Bioscience and Biotechnology P.O. Box 115, Yusong, Taejeon, 305-600, Republic of Korea Tel: 82-42-860-4340 Fax: 82-42-860-4309 Email: doil@mail.kribb.re.kr	h t	Hur, CG. and Choi, D. Generation of Expressed Sequence Tags from Hot Pepper (Capsicum annuum L.) and Sequence Analysis in Relation to Hypersensitive	Lee,S., Kim,SY., Chung,YH., Shin,HJ., Goh,SH., Pai,HS.,

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                  Alignment
Pred. No.:
Score:
Percent Si
Best Local
Query Matc
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 2
BZ560224/c
                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                      멍
                                         Ş
                                                               -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -Sn
                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
RESULT
                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-
                                                               09-857-
                                                                                             ent Similarity:
Local Similarity:
/ Match:
                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  857-
  w
                                                                                                                                                                                                                                                                                               Pseudomonas aeruginosa
Pseudomonas aeruginosa
Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonas aeruginosa
Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadaceae; Pseudomonas.

1 (bases 1 to 801)
Spencer, D.H., Raymond, C.K., Smith, E.E., Sims, E.E.
Burns, J.L., Kaul, R. and Olsen, M.V.
Whole-Genome-Sequence variation among multiple is Psedomonas aeruginosa library
J. Bacteriol. (2002) In press
Contact: Chris K. Raymond
Genome Center
University of Washington
Box 352145, Seattle, WA 98105-2145, USA
Tel: 2062216954
Fax: 2066857244
Fax: 2066857244
                                                                \boldsymbol{\omega}
                                                                                                                                                Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841-4
                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BZ560224
pacs2-164_2
pacs2-164_2
BZ560224
BZ560224.1
GSS.
                                                                                                                                                                                                                                                                                     Email:
Class:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                       α
                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
                                                               (1-14)
                                                                                                                                                                                                                                                                                    craymond@u.washington.shotgun.
                                                                                                                                                                            /organism="Pseudomonas a(
/mol_type="genomic DNA"
/strain="2-164"
/db_xref="taxon:287"
/clone="pacs2-164_2261"
/clone_lib="pacs2-164"
/note="clinical isolate 11brary."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="anther"
/dev_stage="10 weeks a
/clone_lib="KS08"
/note="Vector: pBluesc
                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       801 bj
2261.x1 pacs2-164 Ps
2261, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                              ×
                                                                                  37
9.00
100.00%
100.00%
64.29%
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7.61e-05
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                 .801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:2717788
                                                               BZ560224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BM067231
                                                              (1-801)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-127)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pBluescript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pseudomonas
                       432
                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       after
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ø
                                                                                                                                                                                                                                                      aeruginos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           equenc
                                                                                                                                                                                          2-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SK(-)
                                                                                                                                                                                          64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      germination"
                                                                                                                                                                                          Whole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
aeruginosa
                                                                                   00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       000011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .4
                                                                                                                                                                                        genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                团
                                                                                                                                                                                                                                                                                                                                                                                                                                                Д
                                                                                                                                                                                                                                                                                                                                                                                             isolates
                                                                                                                                                                                                                                                                                                                                                                                                                                                seudomonadal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSS 17-DEC-2002 genomic clone
                                                                                                                                                                                                                                                                                                                                                                                                               Hastings
                                                                                                                                                                                        shotgun
                                                                                                                                                                                                                                                                                                                                                                                                                                                Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                              8
```

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                      RESULT 4
BB574268
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BZ571483/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent
Best Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
DB:
                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                      US-09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
y Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity:
al Similarity:
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutelec Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murina 1 (bases 1 to 172)

Aizawa, K., Akahira, S., Akimura, T., Arai, A., Arakawa, T., Carninci, P., Hanagaki, T., Hayatsu, N., Hiraoka, T., Hirozane, Hodoyama, Y., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Kawai Kojima, Y., Konno, H., Kusakabe, M., Matsuyama, T., Miyazaki, A., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Okazaki, Y., Okido, T., Owa, C., Sakai, C., Sakai, K., Sasaki, T., Sato, K., Shibata, K., Shibata, Y., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagawa, A., Takahashi, F., Tanaka, T., Toya, T., Watahiki, A., Yamamura, T., Yasunishi, A., Yoshida, K., Yoshiki
                                                                                                                                                                            BB574268 172 bp mRNA
BB574268 RIKEN full-length enriched, 11 day
ovary and uterus Mus musculus cDNA clone 50
BB574268
BB574268.1 GI:11470812
EST.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 msh2_191.y1 msh Pseudomonas aerugi
genomic survey sequence.
BZ571483
BZ571483.1 GI:27206544
GSS.
Pseudomonas aeruginosa
Pseudomonas aeruginosa
Bacteria; Proteobacteria; Gammapro
Pseudomonadaceae; Pseudomonas.
1 (bases 1 to 957)
Spencer, D.H., Raymond, C.K., Smith,
Burns, J.L., Kaul, R. and Olsen, M.V.
Whole-Genome-Sequence variation am
Psedomonas aeruginosa library
J. Bacteriol. (2002) In press
Contact: Chris K. Raymond
Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                University of Washington Box 352145, Seattle, WA 98 Tel: 2062216954
Fax: 2066857244
Email: craymond@u.washingt Class: shotgun.
                                                                                                                                                                                                                                                                                                                                               22
                                                                                                                                                                                                                                                                                                                                                                                                       41-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cores
                                                                                                                                                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                       (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  craymond@u.washington.
shotgun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="genomic DN
/strain="MSH"
/db_xref="taxon:287"
/clone="msh2_191"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone_lib="msn"
note="Environmental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone="msh2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P.
                                                                                                                                                                                                                                                                                                                                                                                                      ×
                                                                                                                                                                                                                                                                                                                                                                                                                                 43.5
9.00
100.00%
100.00%
64.29%
8
                                                                                                                                                                                                                                                                                                                                                                                                       BZ571483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lib="msh"
                                                                                                                                                                                                                                                                                                                                                                                                      (1-957)
                                                                                      Akimura, T., Arai, A., Arakawa, T., T., Hayatsu, N., Hiraoka, T., Hirozane, T., Ishii, Y., Itoh, M., Izawa, M., Kawai, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98105-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gammaproteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservati
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bp DNA
aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  edu
                                                                                                                                                                                                                                                                                                                                              396
                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    isolate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               among multiple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aeruginos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ম
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear of genomic clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Whole
                                                                                                                                                                                                                                                   linear EST 30-NOV-200
days pregnant adult female
e 5033401A11, mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sims,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                     00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   isolates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pseudomonadal
                                                                           Miyazaki, A.,
                                Sogabe, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hastings
                                                                                                                                                   Euteleostomi; Murinae; Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSS
     Yoshiki, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          %SS 17-DEC-2002
meh2_191,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    shotgun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0£
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ø
                                                                                                                                                     Mus.
                                                                                                                                                                                                                                                                                    2000
```

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                            Best I
Query
DB:
                               र्
멍
                                                                         -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                              ORIGIN
                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                         œ
                                                                         57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fax: 81-45-503-9216
Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/Carninci,P., Nishiyama,Y., Westover,A., Itoh,M., Nagaoka,S., Sasaki,N., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Thermostabilization and thermoactivation of thermolabile enzymes by trehalose and its application for the synthesis of full length cDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J., Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M., Okazaki,Y. and Hayashizaki,Y.
Automated filtration-based high-throughput plasmid preparation system. Genome Res. 9 (5), 463-470 (1999)
Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning. Methods Enzymol. 303, 19-44 (1999)
plasse visit our web site (http://genome.rtc.riken.go.jp) for
                                                                         841
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sciences Center (GSC), Yokohama Institute
The Institute of Physical and Chemical Research (1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa Tel: 81-45-503-9222
Fax: 81-45-503-9216
Email: Genome Exploration Research (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RIKEN Mouse ESTs (Aizawa, K. et
Unpublished (2000)
Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Muramatsu,M.
ThrSerAlaGlyArgAsnArgArg 14 |||||||||||||| AccTccGcTGGTCGCAATCGCCGG 39
                                                                         (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               visit ou details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="5033401A11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone lib="RIKEN full-length enriched, 11 days pregnant adult female ovary and uterus"
/note="Site 1: SalI; Site 2: BamHI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. 1st strand cDNA was primed with a primer [5' GAGAGAGAGAGGAGAGGAGGCTCTTTTTTTTTTTTTTTVN 3'], cDNA was
                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tissue_type="ovary
/dev_stage="11 days
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sex="female"
                                                                                                            88.8
8.00
100.00%
100.00%
57.14%
                                                                         BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and Hayashizaki, Y.
                                                                         Ň
                                                                         7426
                                                                           \boldsymbol{\omega}
                                                                         1-
                                                                         ·172)
                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and uterus" pregnant, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kanagawa
                                                                                                             172
8
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (RIKEN)
wa 230-0045,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e enzymes
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kawai, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Λq
```

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                              Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                   KEYWORDS
SOURCE
                                                                                                                                     RESULT 6
AA560203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
AW390465
                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similari
Query Match:
                                                                                                                                                                             밁
                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                    DB:
    REFERENCE
                                                                           VERSION
                                                                                        ACCESSION
                                                                                                               DEFINITION
                                                                                                                          Locus
                                                                                                                                                                                                                            US-09-857-
                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ruazil
Brazil
Tel: +55-11-2704922
Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
This sequence was derived from the FP
Project. This entry can be seen in the following org.br/scripts/get 181099-012-c02&t3=1999-10-18&t4=1)
Seq primer: puc 18 forward
High quality sequence start: 40
High quality sequence stop: 128.
Location/Qualifiers
1 .297
"Homo sapiens"
                                                                                                                                                                                                                                                                                                                             Scores
                                                                                                                                                                                                                            841
AA560203
v120h03.r1 Stratagene m
IMAGE:972821 5', mRNA s
AA560203
AA560203.1 GI:2331668
EST.
Mus musculus (house mou
Mus musculus
Eukaryota; Metazoa; Chc
Mammalia; Eutheria; Rod
1 (bases 1 to 402)
                                                                                                                                                                            30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW390465
RC3-ST0186-
AW390465
AW390465.1
EST.
Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (k
HCGP
The 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota;
Mammalia; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                            ACCAGCGCAGGAAGGAACAGAAGG
                                                                                                                                                                                          ThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 297)
Phttp://www.ludwig.org.br/ORESTES
FAPESP/LICR Human Cancer Genome P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                            14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
186-181099-012-c02
                                                                                                                                                                                                                                                                            ty:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
/dev_stage="Adult"
/clone_lib="ST0186"
                                                                                                                                                                                                                                                                                                                                                               /note="Organ: stomach; Vector: pucl8; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning product derived from ORESTES PCR (U.S. Letters Patent application. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Metazoa;
Eutheria;
                                                                                                                                                                                                                            ×
                                                                                                                                                                                                                                                  146
8.00
100.00%
100.00%
57.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to 297)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:6895124
                                                                                                                                                                                                                            AW390465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (human)
                                                                                                                                                                                                                                                                                                                                                              ringency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata;
Primates;
              Chordata;
Rodentia;
                                                 mouse)
                                                                           8
                                                                                                             mouse
                                                                                                   Bequenc
                                                                                                                                                                                                                            (1-297)
                                                                                                                          402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      297 bp
ST018
                                                                                                                                                                                                                                                 Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                                                                                                            153
                                                                                                                                                                                                   14
                                                                                                             Tcell
                                                                                                    Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; V
Catarrhini;
            Craniata; Vertebrata;
Sciurognathi; Muridae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e FAPESP/LICR Human Cancer
n the following URL
/gethtml2.pl?t1=RC3&t2=RC3-
                                                                                                               937311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                       ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Project
                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NA linear
sapiens cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata;
; Hominidae;
                                                                                                              Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01509-010,
                                                                                                                                                                                                                                                   297
0
0
                                                                                                                          linear
                                                                                                              musculus cl
                                                                                                                                                                                                                                                                                                                                                                                                      ; Site 1: Smar, e by cloning products
              Euteleostomi
Murinae; Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-FEB-2(
A sequence
                                                                                                                            18-AUG-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Paulo-
                                                                                                                 clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ST018
               Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000
                                                                                                                                                                                                                                                                                                                                                                                         0f
                                                                                                                            Φ
```

ارجي تا يا توي المعطو الأثارة في ا

```
TITLE
JOURNAL
COMMENT
                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                         RESULT 7
AQ612674/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                   Alignment
Pred. No.:
Score:
                                                                                                                                                                       SOURCI
                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                   us-
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                         COMMENT
                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                  JOURNAL
MEDLINE
PUBMED
    J
                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                    -857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sourc
                                                                                                                                                                                                                                                                                                                                                                                                                           Score
          Sequence-tagged connectors: A sequence scanning the human genome Proc. Natl. Acad. Sci. U.S.A. 96 (19380589 10449764 Contact: Mahairas GG, Wallace JC, Heigh Throughput Sequencing Center
                                                                                                                                                                                                                                                                                                                                    Θ
                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Marra, M., Hill
Geisel, S., Kuc
Schellenberg, K
Theising, B., W
Waterston, R.
The WashU-HHMI
                                                                                                                                                           HS_5107_B2_E12
genomic_clone i
AQ612674
AQ612674.1 GI
GSS.
Homo sapiens (I
                                                                                                                                                                                                                                                                                       σ
                                                                               Hood, L.
Sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Lo
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                  Eukaryota; Metazoa; Chordata; Cra; Mammalia; Eutheria; Primates; Cat. 1 (bases 1 to 536)
Mahairas, G.G., Wallace, J.C., Smit; Keller, A., Shaker, R., Furlong, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further
MGI:553549
Seq primer: -28ml3 revl ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The WashU-HHMI Mouse EST Project Unpublished (1996)
                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                                                                                                      Ψ
                                                                                                                                                                                                                                                                                                                                   1-
                                                                                                                                                           sapiens (human)
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               quality sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                        14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ity sequence stop: .
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hillier,L., Allen,M., Bowles,M., Dietrich,
Kucaba,T., Lacy,M., Le,M., Martin,J., Mor
rg,K., Steptoe,M., Tan,F., Underwood,K., M.,
Wylie,T., Lennon,G., Soares,B., Wilson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus
                                                                                                                                                                                                                             E12
                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                        193
8.00
100.00%
100.00%
57.14%
                                                                                                                                                                                              GI:507395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 40
                                                                                                                                                                                                                                                                                                                                   AA560203
                                                                                                                                                                                                             536 bp DNJ
2 T7A RPCI-11 Human Male
Plate=683 Col=24 p^...
                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                    1-
                                                                                                                                                                                                                  536 bp DNA linear GSS 15-JUI
11 Human Male BAC Library Homo sapien
Col=24 Row=J, genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               musculus
                                                                                                                                                                                                                                                                                                                                    402)
                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                         292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 387
                                                                                          Smith, K.,
T. Young, J.,
                                                                                                                                      Craniata; V
Catarrhini;
                                                                                sequence
                                                                                                                 Swart
                         ۲
                                                                              approach
                                                         9739-
                                                                                                                                      Vertebrata; ; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Louis,
                                                                                                                                                                                                                                                                                                                                                         0
0
0
0
0
                                                                                                     zell, S
Zhao, S
                                                          9744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rich, N., Dubuc, Morris, M., K., Moore, B., Lson, R. and
                                                                                0
                                                          (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contact the information.
                                                                              mapping
                                                                                                                                                  Euteleostomi
                                                                                                                                        Homo.
                                                                                                                Holzman,
                                                                                                      Adams
                                                                                                                                                                                                                              sapiens
                                                                                                    3
                                                                                                                                                                                                                                           JUN-1999
                                                                                                      Ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
|-]
- 1
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                      -Sn
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
CE588296/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent
Best Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE
      FEATURES
                                                                                                                           COMMENT
                                                                                                                                     JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ent Similarity:
Local Similarity:
Y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                The dog genome: survey sequencing and comparative an Science 301 (5641), 1898-1903 (2003)
22875432
14512627
Contact: Kirkness EF
The Institute for Genomic Research
Department of Eukaryotic Genomics, TIGR, 9712 Medica Rockville, MD 20850, USA
Tel: 301-838-0200
Fax: 301-838-0208
Email: ekirknes@tigr.org
Class: shotgun.
                                                                                                                                                                                            CE588296
tigr-gss-dog-17000366361600 Do
genomic survey sequence.
CE588296
CE588296.1 GI:36905077
GSS.
Canis familiaris (dog)
Canis familiaris
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Carnivora;
1 (bases 1 to 589)
Kirkness, E.F., Bafna, V., Halpe
Rusch, D.B., Delcher, A.L., Pop,
Venter, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                         86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: jwallace@u.washington.edu
Clones are derived from the human BAC library RPCI-11. For BAC
library availability, please contact Pieter de Jong
(pieter@dejong.med.buffalo.edu). Clones may be purchased from
BACPAC Resources (http://bacpac.med.buffalo.edu/ordering_bac.htm)
or from Resear h Genetics (info@resgen.com). BAC end Web Server:
http://www.htsc.washington.edu
plate: 683 row: J column: 24
Seq primer: T7
Class: BAC ends
High quality sequence stop: 536.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       University of Washington
401 Queen Anne Avenue North,
Tel: (206) 616-3618
Fax: (206) 616-3887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U
                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            quality sequence stop:
Location/Qualifiers
shotgun.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="RPCI-11 Human Male BAC Library"
/note="Vector: pBACe3.6; Site_1: EcoRI; Site_2: Eco
Male blood DNA was isolated from one randomly chose
and partially digested with a combination of EcoRI
EcoRI Methylase. Size selected DNA was cloned into
pBACe3.6 vector at EcoRI sites"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="genomic DNA"
/db_xref="taxon:9606"
/clone="Plate=683 Col=24
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             251
8.00
100.00%
100.00%
57.14%
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AQ612674
                                                                                                                                                                                                                                                          Chordata; Craniata; Ve
Carnivora; Fissipedia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-536)
                                                                                                                                                                                                                           Halpern, A.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens'
                                                                                                                                                                                                               Pop, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservati
Mismatches
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                              Dog
                                                                                                                                                                                                                                                                                                                                                                                              đq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seattle,
                                                                                                                                                                                                                                                                                                                                                                                Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Row=J"
                                                                                                                                                                                                               Wang, W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WA 98109,
                                                                                                                                                                                                                               Levy,S.,
                                                                                                                                                                                                                                                           Vertebrata;
.a; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                 linear
Canis fam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
0
0
0
0
0
0
                                                                                                                                                                                                                 Fraser,
                                                                                             Medical
                                                                                                                                                                                                                                                                                                                                                                                  familiaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                              Remington, K.
                                                                                                                                                                                                                  ∩
.×
                                                                                                                                                                                     analysis
                                                                                                                                                                                                                                                           Euteleostomi;
Canis.
                                                                                                                                                                                                                                                                                                                                                                                              GSS
                                                                                             Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chosen donor
                                                                                                                                                                                                                                                                                                                                                                                              28-SEP-
                                                                                                                                                                                                                                                                                                                                                                              genomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                               Drive
                                                                                                                                                                                                                                                                                                                                                                                 -2003
ic,
```

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
CF568862
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SD
                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                               ORIGIN
                                                                                                                                                                                                                                                                        PEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ent Similarity:
Local Similarity:
/ Match:
                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores:
                                                                                                                                                                                                                                                                               Contact: Jiang Lu, FAMU, Way Viticulture Centre, FAMU, Ta Florida A&M University Tallahassee, FL 32317, USA Tel: (850) 412-7393
Fax: (850) 561-2617, (772) 4
Email: jiang.lu@famu.edu, Seq primer: T3 Primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CF568862
FAMU_USDA_FP_00084 Vishuttleworthii cDNA sCF568862
CF568862.1 GI:349949
EST.
Vitis shuttleworthii
                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core en rosids; Vitaceae; Vitis.

1 (bases 1 to 594)

Hunter, W.B., Dang, P.M., Chaparro, J.X., Lu, J. and Leon Genes expressed in Vitis shuttleworthii Lunpublished (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -1
                                                                                                                                                                                                                                                                                                                                                                                                                                                            shuttleworthii
shuttleworthii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .589
/organism="Canis familiaris"
/mol_type="genomic DNA"
/strain="Standard Poodle"
/db_xref="taxon:9615"
/clone_lib="Dog Library"
/note="Site_l: BstXI; Librari
peripheral blood"
                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:246827"
/sex="Mixed population"
/tissue_type="Entire tendril, ]
/dev_stage="At blooming"
/lab_host="XL1-Blue"
/clone_lib="Vitis_shuttleworthing"
                                                                                                      /clone lib="Vitis shuttleworthii L., grape"
/note="Vector: pBluescript II SK+; Site_1: EcoRI; Site_2
XhoI; A high quality EST with at least 100 contiguous
bases at Trace Tuner score of 20 or better. Construction
by PM Dang, USDA, ARS, U.S. Horticultural Research Lab,
Ft.Pierce, FL, USA."
                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                 organism="Vitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ×
   275
8.00
100.00%
100.00%
57.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               273
8.00
100.009
100.009
57.14%
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:34994945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CE588296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vitis
A 5', π
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     594 bp mRNA
s shuttleworthii
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                      Wayne Hunter,
Tallahassee,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ហ
                                                                                                                                                                                                                                                 shuttleworthii"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89)
Length:
Matches:
Conservative
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                         46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Libraries
                                                                                                                                                                                                                                                                                                                                                       USDA,
FL
                                                                                                                                                                                                   leaves,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  were
   000005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 000005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
grape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                prepared
                                                                                                                                                                                                    bud,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
Vitis
                                                                                                                                                                                                                                                                                                                                                                                                                                       eudicots;
                                                                                                                                                                                                     m
                                                                                                                                                                                                     lowe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-SEP-2003
                                                                                                                                                      <u>ب</u>
Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
AZ419370/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                   sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ហ
```

```
841 - 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rm. 308, Biomedical Rel: 801 585 5606
Fax: 801 585 7177
Email: ddunn@genetics
Insert Length: 10000
Plate: 0195 row: P
Seq primer: CACACAGGI
Class: plasmid ends
High quality sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mouse whole genome sc
plasmid inserts
Unpublished (2000)
Contact: Robert B. We
University of Utah Ge
University of Utah
Rm. 308, Biomedical P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
cores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dunn, D., Aoyagi, A., Barber, M., Beacorn, T., Duval, B., Hamil, C., Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly, M., Rose, M., Rose, R., Stokes, R., Tingey, A., von Niederhausern, A. and Wright, D., Weiss, R.

Mouse whole genome scaffolding with paired end reads from 10kb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1M0195P18R Mouse 10kb plasmid clone UUGC1M0195P18 R, genomic AZ419370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota;
Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AZ419370.1
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ThrSerAlaGlyArgAsnArgArg 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ce: 0195 row: P column: 18
primer: CACACAGGAAACAGCTATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             quality sequence
                                                       Laboratory Mouse DNA Resources (http://www.jax.org/resources/documents/dnares/). The DNA was hydrodynamically sheared by repeated passage through a 0.005 inch orifice at constant velocity. The sheared DNA was blunt end-repaired with T4 DNA polymerase and T4 polynucleotide kinase. Adaptor oligonucleotides were ligated to the blunt ends in high molar excess. The adaptored DNA was purified and size-selected for a 9.5 to 10.5 kb range using preparative agarose gel electrophoresis. Vector DNA was prepared from a derivative of pWD42 (gi|4732114|gb|AF129072.1), a copy-number inducible derivative of plasmid R1. The vector was ligated with adaptors complementary to the insert adaptors and purified. The sheared, adaptored mouse DNA was annealed to adaptored vector DNA, and transformed into chemically-competent E. coli XL10-Gold (Stratagene) cells and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ddunn@genetics.utah.edu
Length: 10000 Std Error:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Mouse
/note="Vector: PWI
musculus C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Metazoa; Chordata; Craniata; Vertebrata; l
Eutheria; Rodentia; Sciurognathi; Muridae;
1 to 679)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="genomic
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sex="Male"
lab_host="E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="UUGC1M0195P18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus musculus"
mol type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:10543383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CF568862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    equence stop:
ion/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ost="E. Coli strain XL10-Gold, T1-resistant,
lib="Mouse 10kb plasmid UUGCIM library"
Vector: PWD42nv; Purified genomic DNA from
is C57BL/6J (male) was obtained from the Ja
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Weiss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polymers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-594)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               đq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Research Bldg.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UUGCIM library Mus musculus genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
ა
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi; Murinae; Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSS 03-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                     from M.
che Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
M
                                                                                                                                                                                                                            derivative
                                                                                                                                                                                                                                                                                                                                                                                                         The DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SLC,
                                                                                                                                                                            ligated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            i
A
                                                                                                                                                                                                                                                                         ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ij
```

-Sn

엉

DB:

```
RESULT 11
AZ964281/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
Percent
Best Loc
Query Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ent Similarity:
Local Similarity:
Match:
                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert B. W. University of Utah G. University of Utah Rm. 308, Biomedical E 84112, USA
Tel: 801 585 ECCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AZ964281
AZ964281.1
GSS.
Mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seg primer: CACACAGGAAACAGCTATGACC Class: plasmid ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AZ9642
2M0233
clone
                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error:
Plate: 0233 row: J column: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 686)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64281
233J19R Mouse 10kb
ne UUGC2M0233J19 R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1-
/GIONE- "PEMAILE"
// lab_host="E. coli strain XL10-Gold, T1-resistant, F-"
// lab_host="E. coli strain XL10-Gold, T1-resistant, F-"
// clome_lib="Mouse_10kb_plasmid_UUGC2M_library"
// note="Vector: PWD42nv; Purified_genomic_DNA from M.
musculus_C57BL/6J (female) was obtained from the Jackson
Laboratory Mouse_DNA Resource
(http://www.jax.org/resources/documents/dnares/). The DNA
was hydrodynamically sheared by repeated passage through a
0.005 inch orifice at constant velocity. The sheared DNA
was blunt end-repaired with T4 DNA polymerase and T4
polynucleotide kinase. Adaptor oligonucleotides were
ligated to the blunt ends in high molar excess. The
adaptored DNA was purified and size-selected for a 9.5 to
10.5 kb range using preparative agarose gel
electrophoresis. Vector_DNA was prepared from a derivative
of pWD42 (gi|4732114|gb|AF129072.1), a copy-number
inducible derivative of plasmid R1. The vector was ligated
with adaptors complementary to the insert adaptors and
purified. The sheared, adaptored mouse DNA was annealed to
adaptored vector_DNA, and transformed into
chemically-competent E. coli XL10-Gold (Stratagene) cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               801 585
801 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14)
                                                                                                                                                                                                                                                                                                    /organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="UUGC2M0233J19"
                                                                                                                                                                                                                                                                                                                                                                                   ity sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8.00
100.00%
100.00%
57.14%
8
                                                                                                                                                                                                                                                                                                                                                                         . 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:13835508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5606
7177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AZ419370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Weiss
Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barber, M., Beacorn, T., Duval, B., Ha

3., Mahmoud, M., Meenen, E., Pedersen,

Rose, R., Stokes, R., Tingey, A., von
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polymers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               679)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp DN
d UUGC2M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Research Bldg.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   paired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              library Mus musculus genom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      end
                                                                                                                                                                                                                                    , T1-resistant, F-"
2M library"
nomic DNA from M.
ined from the Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi
Murinae; Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hamil,C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                    derivative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         genomic
                                                             ligated
and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
AZ741218/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
Percent Sim
Best Local
Query Match
DB:
                                                           Alignment
Pred. No.:
                      Percent
Best Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              us-
                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -60
                                                                                                                                                                                                                                                                                            sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85
                  Similarity:
al Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores
                                                                           cores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BnW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
```

₽

```
Similarity:
cal Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 0200
Fax: 301 838 0208
Email: szhao@tigr.org
Clones are derived from the mouse BAC library RPCI-24. For BAC
library availability, please contact Pieter de Jong
(pdejong@mail.cho.org). Clones may be purchased from BACPAC
Resources (http://www.chori.org/bacpac/orderingframe.htm). BAC end
page: http://ww .tigr.org/tdb/bac_ends/mouse/bac_end_intro.html
Plate: 145 row: M column: 10
Seq primer: SP6
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhao, S., Nierman, W., Malek, J., Shatsman, S., Akir Tsegaye, G., Geer, K., Krol, M., Shvartsbeyn, A., Ge Russell, D., de Jong, P. and Fraser, C.M.

Mouse BAC End Sequences from Library RPCI-24

Unpublished (1999)

Other GSSs: RPCI-24-145M10.TV

Contact: Shaying Zhao

Department of Eukaryotic Genomics
The Institute for Genomic Research

9712 Medical Center Dr., Rockville, MD 20850, US
Tel: 301 838 0208

Fax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus mus-
Eukaryota;
Mammalia; F
1 (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AZ741218

RPCI-24-145M10.TJ |

RPCI-24-145M10, genometric services of the serv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bas
Zhao, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTACATCAGCAGGAAGAAATAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerThrSerAlaGlyArgAsnArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
                                                                                                                                                                                                               BamH1
DNA."
                                                                                                                                                                                                                                   /cell_type="Spleen/Brain"
/clone_lib="RPCI-24"
/note="Vector: pTARBAC1; Site_1: BamH1; Site_2: BamH1;
/note="Vector: pTARBAC1; Site_1: BamH1; Site_2: BamH1;
RPCI-24 Mouse BAC Library produced by Pieter de Jong. The
library was cloned in the pTARBAC1 cloning vector at the
BamH1 sites using MboI partially digested male C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                    db_xref="taxon:10090"
clone="RPCI-24-145M10"
sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eutheria;
1 to 816)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ×
368
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                314
8.00
100.
100.
57.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:12515463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AZ964281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      selected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.00%
    000%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RPCI-24 Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-686)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Burvey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ampicillin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservati
Mismatches
Indels:
Length:
Matches:
Conservati
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; | Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ive
                             ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genomic
    0 8 8 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear (
                                                                                                on.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Akinret, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gebregeorgis, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Levins, M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus.
```

¢

```
RESULT 14
BZ603235
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
BI851822/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             $
                                                                            뭐
                                                                                               $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                       SD
                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
 ACCESSION
                                                                                                                                                                                     Score:
                                                                                                                                                                                                           Alignment
                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                  Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                  No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mat
                                                                                                                       85
                                                                                                                      7-
                                                                                                                                                                                                                                                                                                                                                                                     cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution informa
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11997 row: p column: 18
High quality sequence stop: 773.
Location/Qualifiers
ce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841-
                                                                                                                       841
                                                                                                                                                                                                           Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence.
BI851822
BI851822.1 GI
EST.
Mus musculus (
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BI851822
603378977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria; Rodentia; S
1 (bases 1 to 823)
NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health,
WHADA95TF Human sapiens genomic BZ603235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
Contact: Robert St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                BZ603235
                                                                             7
                                                                                                ហ
                                                                          378972F1 NCI_CGAP_Mam2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus (house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-
                                                                                                                       (1-14)
                                                                                                                                                                                                                                       /mol_type="mRNA"
/strain="FVB/N-3"
/db_xref="taxon:10090"
/clone="IMAGE:5391617"
/tissue_type="tumor, biopsy sample"
/tissue_type="tumor, biopsy sample"
/dev_stage="5 months"
/dev_stage="5 months"
/lab_host="DH10B"
/clone_lib="NCI_CGAP_Mam2"
/note="Organ: mammary; Vector: pCMV-SPORT6; Sisite_2: NotI; Cloned unidirectionally. Primer Library constructed by Life Technologies. Inverproviding samples: Gilbert Smith, NIH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14)
                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ×
                                                                                                                     ×
                                                                                                                                          371
8.00
100.00%
100.00%
57.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:15992569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AZ741218
                                                                                                                       BI851822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg,
         MCF7 breast cancer clone MCF7_1-19021,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-
                                                                                                                       1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    823 k
                                                                                                                       .823)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     816)
                                839 bp
                                                                                                                                                     Conservative: Mismatches: Indels:
                                                                                                                                                                                    Length: Matches:
                                                                                                 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                           704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             đq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalian
         DNA li cell line, genomic s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gene
                                                                                                                                            82
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
Clone
           e library
survey se
                                                                                                                                                                                                                                                                                                                                                                                                                                                       information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inc.
ortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Collection
                                                                                                                                                                                                                                                    )RT6; Site 1: Sal
Primer: Oligo d
ss. Investigator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 10-OCT-2001
IMAGE:5391617 5',
 sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi; Murinae; Mus
                      GSS 08-JUN-
/ (MCF7_1) H
                                                                                                                                                                                                                                                                                                                                                                                                                                                       can
                                                                                                                                                                                                                                                                                                                                                                                                                                                        эd
                                                                                                                                                                                                                                                                 SalI;
jo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mug.
                                2003
                                                                                                          VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                      RESULT 15
CG137878/c
LOCUS
TITLE
JOURNAL
COMMENT
                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                       Alignment Pred. No.:
                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                             US-09-857-
                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sourc
                                                                                                                                                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                                             841-
                                                                                                                                                                                                                                                                                                                                                                   Scores
                                                                                                                                                                                                                                   22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSS.
Homo sapien
Homo sapien
Eukaryota;
Mammalia; E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BZ603235.
                                                                                                                                                                                                                                                       Þ
                                                                                                                                                                                                                                                                             (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \vdash
                                                                                                                                                                                                                                                                             ×
```

P<sub>a</sub> y

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 839)
Volik,S., Zhao,S., Chin,K., Brebner,J.H., Herndon,D.; Kowbel,D., Huang,G., Lapuk,A., Kuo,W.-L., Magrane,G. Gray,J.W. and Collins,C.
End-sequence profiling: Sequence-based analysis of al Proc. Natl. Acad. Sci. U.S.A. 100 (13), 7696-7701 (2 22709111 12788976
Contact: Volik SV Colin Collins' lab UCSF Comprehensive Cancer Center UCSF Box 0808, San Francisco, CA 94143-0808, USA Tel: 415 502 7066
Fax: 415 502 7066
Fax: 415 502 5665
Email: svolik@cc.ucsf.edu
This clone is available from Amplicon Express http://www.genomex.com
Class: BAC ends.
                                                                                                                                           CG137878

N PUICG49TD ZM_0.6_1.0_KB Zea mays genomic clc genomic survey sequence.

CG137878

CG137878

CG137878.1 GI:34028661

GSS.

Zea mays

Eukaryota; Viridiplantae; Streptophyta; Embr Spermatophyta; Magnoliophyta; Liliopsida; Pcclade; Panicoideae; Andropogoneae; Zea.

1 (bases 1 to 889)

This is a conservation of the streptophyta; Conservat
Resnick, A., Fraser, C.M., Yu
Bennetzen, J.
Maize Genomics Consortium
Unpublished (2003)
Other_GSSs: PUICG49TB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGAAAGCACCTCAGCAGGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerGluSerThrSerAlaGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens (human)
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Express (h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapien
/mol_type="genomic DNA
/db_xref="taxon:9606"
/clone="MCF7_1-19021"
/sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="Human MCF7 breast car
(MCF7_1)"
/note="Vector: pECBAC1; Site_1: I
constructed from MCF7 breast can
Express (http://www.genomex.com)
procedure."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         378
8.00
100.00%
100.00%
57.14%
8
                                                                                                         Fraser, C.M., Yuan, Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:315116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BZ603235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-839)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens'
mic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                       Van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Site_1: HindIII reast cancer cel
                                                                                                                  San
                                                                                                                 Aken,S., U
San Miguel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vertebrata; l
i; Hominidae;
                                                                                                                                                                                                                                 Embryophyta; Tracheophyta; a; Poales; Poaceae; PACCAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HindIII;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Herndon, D.R. Magrane, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               839
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              using their
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                 Utterback, T., P., Ma, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZMMBTa0550J01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               s library
le by Ampli
standard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tao,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jong, P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genomes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           was
```

```
Alignment Scores:
Pred. No.:
Score:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
Search completed: December Job time : 2048 secs
                                       멍
                                                           Ś
                                                                              US-09-857-841-4 (1-14)
                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                         Contact: Cathy Whitelaw
TIGR
9712 Medical Center Drive, Rockville, MD 2085
Tel: 301-838-5843
Fax: 301-838-0208
Email: whitelaw@tigr.org
Seq primer: TF
Class: sheared ends.
Location/Qualifiers
1. .889
/organism="Zea mays"
/mol_type="genomic DNA"
/strain="873"
/db_xref="taxon:4577"
/clone_"zMMBTa0550J01"
/note="Topo; Site_1: EcCoT selected genomic DNA library"
                                       600
                                                       ហ
                                      GluSerThrSerAlaGlyArgAsn 12
                                                                             x CG137878 (1-889)
                                                                                                  398
8.00
100.00%
100.00%
57.14%
9
         5,
         2004,
          11:10:41
                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                       577
                                                                                                                                                                                                                                                                                                                                                    20850,
                                                                                                   0000
                                                                                                                                                                                                       EcoRI;
                                                                                                                                                                                                      0.
                                                                                                                                                                                                        σ
                                                                                                                                                                                                        0
                                                                                                                                                                                                       high
```

```
Command line parameters:
-MODEL=frame+_p2n.model -DEV=xlh
-Q=/cgn2_1/USPTO_spool/US09857841/runat_03122004_160614_19150/app_query.fag=-DB=Issued_Patents_NA -QFMT=fastap -SUFFIX=olip2n.rni -MINMATCH=0.1 -LOOPCI-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=quality -THR_MIN=1 -ALIGN=15 -MODE=LOCAL-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US09857841_@CGN_1 1_69_@runat_03122004_160614_19150 -NCPU=6 -ICPU=3-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPON-FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                               Minimum
Maximum
                                                                                                                                                                                                                                                                                                                               Word
                                                                                                                                                                                                                                                                                                                                                                                                Titl
Perf
Sequ
                                                                                     Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Run
                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                             ea
                                                                                                                                                                                                                                                                                                                                                                                   coring
                                                                                                                                                                                                                                                                                                                                                                                                equenc
                                                                                                                                                                                                                                                                                  S
B
                                                                                                                                                                                                                                                                                                                   čtα
                                                                                                                                                                                                                                                                                                                                            rched
                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                       0 0
  144446446
                                                                                                                                                                                                                                                                                                                                                                                                       СТ.
::
                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                 processing:
                                                                                                                     Pred.
score
and is
                                                                                                                                                                                                                                                                                                                               ize
                                                                                                                                                                                                                                                                                                                   numbe
                                                                                                                                                                                                                                                                                                                                                                                                 \mathbf{o}
                                                                                                                                                                                                                                                                                               BG
BG
                                                                                                                                                                                                                                                                                                                                                                                    table
                                                                                                                                                                                                                                                                                                                                                                                                       score
                                                                                      Sco
                                                                                                                                                                                                                                                                                              seq
seq
                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                   Ħ
                                                                                                                     No. is the greater to a derived
  1111111111111
                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic
                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                   H
                                                                                                                                                                                                                                                                                               \mu\mu
                                                                                                                                                                                                                                                                                                                                                       OLIGO
Xgapop
Ygapop
Fgapop
Delop
 1000.0
1000.0
1000.0
1000.0
                                                                                                                                                                                                                                                                                              length:
                                                                                     Query
Match
                                                                                                                                               6::43213
                                                                                                                                                                                                                                                                                                                   þ
                                                                                                                                                                                                                                                                                                                                                                                                       US-
                                                                                                                                                                                                                                                                                                                                             œ
                                                                                                                                                                                                                                                                                  Listing
                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                        ecember
                                                                                                                                              sued_Patents_NA:*
/cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                             45
                                                                                                                                                                                                                                                                                                                                                                                                MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                          the nu
                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                   \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                             07
                                                                                                                                                                                                                                                                                                                                                                                                                                                     search,
                                                                                                                                                                                                                                                                                                                   88
                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                     ength
                                                                                                                                  number
                                                                                                                                                                                                                                                                                                                                                                       \omega
                                                                                                                      n or equal analysis c
                                                                                                                                                                                                                                                                                                                                                         9900
                                                                                                                                                                                                                                                                                                                  1 8
                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                             Φ
  130
130
130
130
130
130
130
130
130
                                                                                                                                                                                                                                                                                  Ħ
                                                                                                                                                                                                                                                                                                                                            ap
                                                                                                                                                                                                                                                                                                                                                                                                              -84
                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                  irst
                                                                                                                                                                                                                                                                                                                  fying
                                                                                                                                                                                                                                                                                                                                                          0000
                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                               00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                    using
                                                                                      0
                                                                                                                                                                                                                                                                                                                                                         Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                             5539
                                                                                                                                                                                                                                                                                                                                                                                                                                        004,
  155333333337
                                                                                                                                                                                                                                                                                  45
                                                                                                                                                                                                                                                                                               0
US-08-090-193-14
US-08-488-031-14
US-08-486-569-14
US-08-488-027-14
US-08-482-663-14
US-08-482-663-14
US-08-470-349-14
US-08-475-610-14
PCT-US92-00277-14
PCT-US92-00278-14
US-08-090-193-11
                                                                                                                                                                                                                                                                                                                   cho
                                                                                                                 of to
                                                                                                                     results l to the of the t
                                                                                     IJ
                                                                                                                                                                                                                                                                                                                                             444
                                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                     m
                                                                                                                                                                                                                                                                                  ummarie
                                                                                                                                                                                                                                                                                                                  en
                                                                                                                                                                                                                                                                                                                                                                                                                                                     rame
                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        version - 2004
                                                                                                                                                                                                                                                                                                                                                                       \sigma
                                                                                                                                                                                                                                                                                                                                                         7700
                                                                                                                                                                                                                                                                                                                  pa
                                                                                                                                                                                                                                                                                                                                             re
                                                                                                                    predicted be score of the total score
                                                                                                                      (T
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Buld
                                                                                                                                                                                                                                                                                                                   rame
                                                                                                                                                                                                                                                                                                                                                          0000
                                                                                                                                                                                                                                                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                                                                                             sidue
                                                                                                                                                                                                                                                                                                                                                                                                                          ); Search (without a 146.339 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                    n2ď
                                                                                                                                                                                                                                                                                                                   ers
                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                     the result k
re distributi
                                                                                                                                                                                                                                                                                                                                                                                                                                                     mode
                                                                                                                                                                                                                                                                                                                                                                                                                          ch time 68 S
t alignments
Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ltd
                                                                                                                                                                                                                                                                                                                   16
                                                                                                                                                                                                                                                                                                                                                                                                                           cell
                                                                                                                                                                                                                                                                                                                   063
Sequence
                                                                                    escripti
                                                                                                                     to hav
being
tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                          updates/sec
                                                                                                                                   have
                                                                                                                            printed
                                                                                                                                                                                                                                                 -LOOPCL=
  Ø
                                                                                                                                                                                                           FGAPOP=6
asta
CL=0
                                                                                                                                                                                                                                                        Ó
                                                                                                                                                                                                         RESULT 1
US-08-090-193
; Sequence 14
; Patent No.
; GENERAL IN
                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

	44					-	_	_	-	_	-	-	-	_	_												_	_		-	_	-
4 1	14 10	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4 1	4
0	00.0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0.	0	0	0	0	0	0	0
ហ	153	S	ហ	ហ	ហ	S	ហ	U	σ	ហ	ū	v	U	U	v	v	ហ	U	ū	U	U	ហ	W	w	U	Ü	W	Ü	Ü	W	S	w
۲	ហ	v	ហ	υ	w	W	w	w	W	W	N	ຎ	N	N	N	N	N	N	N	N	⊷	μ	σ	ហ	w	w	w	Ŋ	N	N	N	8
-08-090-193-1	CT-US92-00278-1	CT-US92-00278-	CT-US92-00277-1	CT-US92-00277-9	S-08-475-610-1	S-08-475-610-9	S-08-470-349-	S-08-470-349-	-08-482-658-	S-08-482-658-	S-08-482-663-	S-08-482-663-	S-08-090-192-	S-08-090-192-	S-08-488-027-	S-08-488-027-	S-08-486-569-	S-08-486-569-	S-08-488-031-	S-08-488-031-	S-08-090-193-	S-08-090-193-	T-US92-00278-1	CT-US92-00277-	S-08-475-610-1	08-470-349-1	S-08-482-658-1	-08-482-663-1	S-08-090-192-1	8-488-027-1	S-08-486-569-	8-488-031-1
Sequence 12, Appl	equence 12, App	ence 10, App	equence 10, App	ence 9, A	equence 10, App	ence 9, A	equence 10,	ence 9, App	equence 10, App	equence 9,	nce 10, App	equence 9,	equence 10, App	ወ	equence 10, App	equence 9, Appl	equence 10, App	e 9, Appl	equence 10, App	equence 9, A	ence 10, App	equence 9, Appl	e 11,	ence 11, Ap	equence 11, Ap	ence 11, App	equence 11, Ap	Sequence 11, Appl				

## ALIGNMENTS

```
S-08-090-193-14
Sequence 14, Application US/08090193
Patent No. 5641673
GENERAL INFORMATION:
APPLICANT: Baseloff, James
APPLICANT: Baseloff, James
APPLICANT: Baseloff, James
APPLICANT: Goodman, No. 5641673bert
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Cell Ablation Using Trans-Splicing Ribozymes
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein & Fox
STREET: 1100 New York Avenue, Suite 600
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/090,193
FILING DATE: 23-DEC-1993
CLASSIFICATION STATE: APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DCT/US92/00277
FILING DATE: 11-JAN-1991
APTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
```

**B**n

```
US-08---; Sequence 1-, ; Sequence 1-, ; Patent No. 58495; GENERAL INFORMA; APPLICANT: I APPLICANT: I APPLICANT: I APPLICANT: I TOLICANT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
US-08-488-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us-
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
                                                                                                                                                                             COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Ver:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/488,031

FILING DATE: 07-JUN-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/090,193

FILING DATE: 23-DEC-1993

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/00277

FILING DATE: 16-JAN-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/642,330

FILING DATE: 17-JAN-1991

ATTORNEY/AGENT INFORMATION:

NAME: Burgaisky Lawrence B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
ADDRESSEE: Sterne,
STREET: 1100 New Your CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
                                                                                               NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3080002/MAC/LBB
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
TELEFAX: (202) 371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: both 090-193-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -090-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FERENCE/DOCKET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application
5849548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I: Goodman, Howard
INVENTION: Cell A
    SEQUENCES: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sterne, Kessler, G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brand, Andrea
Perrimon, No. 58
Goodman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        poth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.32e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-090-193-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08488031
                                                                                       14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ablation Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5849548bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0609.3080001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                             Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            000013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ribozymes
```

```
Score:
Percent
Best Loc
            Percent Si
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
US-08-486-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
DB:
                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-488-
                                                            Alignment
                                                 Pred.
                                                                                           COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Vers
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/486,569
FILING DATE: 07-JUN-1995
PRIOR APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 23-DEC-1993
PRIOR APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1992
PRIOR APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3080006
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Patent No
GENERAL
                                                                                    08-486-569-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
y Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLI(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLI
                                               No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
 ocal
Matcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
COUNTRY: U
ZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity:
al Similarity:
           imilarity:
l Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OLOGY:
                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CANT: Haseloff, James
CANT: Brand, Andrea
CANT: Perrimon, No. 5863774bert
CANT: Goodman, Howard M.
OF INVENTION: Cell Ablation Using Trans-Splicing Ribozymes
R OF SEQUENCES: 56
SPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       569-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   031-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14, Application US/08486569
). 5863774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Washington
D.C.
RY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: Sterne, Kessler, G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ×
3.32e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.32e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.32e-06
14.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-488-031-14 (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                               3080006/MAC/LBB
Length:
Matches:
Conservative
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                               Version
                        ive
                                                                                                                                                                                                                                                                                                                                                                                                               #1.
 130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14
```

```
Percent Sin
Best Local
                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BG
                     8
                                         $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-488-027-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                 us-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us-09-
RESULT
                                                                                                  Query
                                                                                                                                              Pred.
                                                                                                                                                       Alignment
                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
S-08-488-027-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1:
Patent No.
GENERAL II
                                                                                                                                                                                                                                    TELEFAX:
INFORMATION E
SEQUENCE CH
                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,027
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
                                                                  9
                                                                                                                                                                                                                                  APPLICATION NUMBER: US 07/64
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
TITLE OF IN
NUMBER OF S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: CENUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                            No.
                                                                  .857-
                                                                                                  Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 857-841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                           Similarity:
al Similarity:
                                                                  841
                                                                                                                                                         Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , Application 5866384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1100 New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
                                                                (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goodman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perrimon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brand, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                               ×
                                                                                    3.32e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-486-569-14
                                                                US-08-488-027-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Howard M.
Cell Ablation Using
56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kessler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08488027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        James
                                                                                                                                                                                                                                                                                           35,086
3R: 0609.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5866384bert
                                                                                                                                                                                                                                                                                                                                                   07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                                                                                                            .3080003/MAC/LBB
                                                                                                Conservativ
Mismatches:
Indels:
                                                                                    Gaps
                                                                                                                                 Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-130)
                                                                (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Trans-Splicing
                                                                                                                       ive:
                                                                                       130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94
                      94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ribozymes
```

```
RESULT 6
US-08-482-6
; Sequence
; Patent No
; GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -S0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 07/642
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEPAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Patent No
GENERAL
APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -80-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

COMPUTER: PatentIn Release #1.0, 1

COMPUTER: 11-NOV-1993

CLASSIFICATION NUMBER: PCT/ US 92/00:

APPLICATION NUMBER: PCT/ US 92/00:

PRIOR APPLICATION DATA:

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -060-80
                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
APPI
  NUMBER
CORRES
ADDR
STRE
                                                                                                      APPLIC
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLI
                                                                                                                                                          APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: 1
TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
STREET: 11
CITY: Wash
STATE: D.C
COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
TYPE: r
                                                                        ICANT: Haseloff, James ICANT: Brand, Andrea ICANT: Perrimon, No. 11 ICANT: Goodman, Howard E OF INVENTION: Cell 1 ER OF SEQUENCES: 56
                                                                                                                                                                                                        NO. DOULTION:
L INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14, APE-
O. 5874414
                                                                                                                                                                                                                                                                                                      663-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CANT:
SPONDENCE ADDRESS:
RESSEE: Sterne, Kessler, G
EET: 1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANT: Haseloff, James
ANT: Goodman, Howard M.
OF INVENTION: Trans-Splicing
OF SEQUENCES: 51
                                                                                                                                                                                                                                                          14, Application 5882907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                      53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                   \vdash
                                                                                                                                                                                                                                                                                                                                                                                  Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3: Sterne, Kessler, G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         base pairs
ic acid
both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.32e-06
14.00
100.00%
100.00%
100.00%
                                                                           Howard M.
Cell Ablation
56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-090-192-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08090192
                                                                                                                                                                                                                                                                                   US/08482663
                                                                                                                                                                                                        James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/090,192
                                                                                                                                                    5882907bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07/642,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0609.3030001
  Goldstein & For South Portion of the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goldstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                      Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
71 TT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130)
                                                                                                       Trans-Splicing
 Fox
te 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0000
                                                                                                          Ribozymes
```

Washington D.C.

```
RESULT 7
US-08-482-658-14
; Sequence 14, Application U
; Patent No. 6010904
; Patent INFORMATION:
; GENERAL INFORMATION:
; APPLICANT: Brand, Andr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Ver:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/482,663

FILING DATE: 07-JUN-1995

PRIOR APPLICATION NUMBER: 08/090,193

FILING DATE: 23-DEC-1993

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/00277

FILING DATE: 16-JAN-1992

PRIOR APPLICATION NUMBER: US 07/642,330

FILING DATE: 17-JAN-1991

ATTORNEY/AGENT INFORMATION:

NAME: Buggisky Lawrence B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -80
                                                                                         APPLICANT: Goodman, How
TITLE OF INVENTION: Cel
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Ke
STREET: 1100 New York
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Washington STATE: D.C. COUNTRY: U.S.A. ZIP: 20005 COMPUTER READABLE FOR MEDIUM TYPE: Flo
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                   857-841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -663-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores
                                                                                                                                                                                                                                                                                                                                                                        53
                                                                                                                                                                                                                                                                                                                                                                                                     \vdash
                                                                                                                                                                                                                                                                                                                                                                                          MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                          ATGGACAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGA
                                                                                                                                                                      MATION:
Haseloff, umard, Andrea
Perrimon, No. 601
Goodman, Howard I
TION: Cell Ab
                                                                                                                                         1100 New York Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                    ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.32e-06
14.00
100.00%
100.00%
100.00%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-482-663-14
                                                                                                                                                                                                                                   No. 6010904bert
                                                                                                                                                                                                                                                                                                              US/0848265
                                                                                                                                                                                                       Ablation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6090
                                                                                                                                         Goldstein & Fox , N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .3080005/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                   Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Version
   Version
                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-130)
                                                                                                                                                                                                   Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #1.
     #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 440000
                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                       Ribozyme
```

```
RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-482-658-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 07/64
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 14
Patent No.
GENERAL IN
       NUMBER OF SEQUENCES: 51

CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstornesser: 1100 New York Avenue, Suite STREET: 1100 New York Avenue, Suite CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Verence CLASSIFICATION NUMBER: US/08/470,349
FILING DATE: 06-JUN-1995
CLASSIFICATION NUMBER: 08/090,192
FRIOR APPLICATION NUMBER: 08/090,192
FILING DATE: 11-NOV-1993
APPLICATION NUMBER: PCT/ US 92/002:
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: PCT/ US 92/002:
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 08/090 FILING DATE: 23-DEC-1993 PRIOR APPLICATION DATA: APPLICATION NUMBER: PCT/US FILING DATE: 16-JAN-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                APPLIC
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPI
FILI
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                            APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
APP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores:
                                                                                                                                                                                                                                                                                                                                                                                                               CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           349-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LICATION NUMBER: US/01
ING DATE: 07-JUN-1995
APPLICATION DATA:
LICATION NUMBER: 08/01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841-4
JICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                           14, Application US/08470349
). 6015794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NG DATE: 16-JAN-1992
APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ទ
                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                            I: Goodman, Howard M.
INVENTION: Trans-Splicing
SEQUENCES: 51
DENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                            Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x US-08-482-658-14 (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.32e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                             James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/090,193
Sn
                                                                                                                                         US/08/470,349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PCT/US92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/482,658
07/642,333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0609.3080008/MAC/LBB
                                                                                                                                                                                                                                                                                                                  Goldstein &
e, Suite 600
                                              92/00278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                Ribozymes
                                                                                                                                                                        Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0000
```

```
RESULT 9
US-08-475-610
; Sequence 14
; Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -60-Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFOR APPLICANT:
APPLICANT:
                                                                                    COUNTRY: U.S.A.

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Ver:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/475,610

FILING DATE: 07-JUN-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/090,193

FILING DATE: 23-DEC-1993

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/00277

FILING DATE: 16-JAN-1992

PRIOR APPLICATION NUMBER: US 07/642,330

FILING DATE: 17-JAN-1991

ATTORNEY/AGENT INFORMATION:

NAME: Rightsky Lawrence R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-4
TELEFAX: INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
TITLE OF IN
NUMBER OF S
           TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 371-2540
TELEFAX: (202) 371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Sterne
STREET: 1100 New
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   857-841-4
                                                   NAME: Bugaisky, Law
REGISTRATION NUMBER:
REFERENCE/DOCKET NUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
TOPOLOGY: bo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14,
                                                                                                                                                                                                                                                                                                                                                                                                                                ANT: Goodman, OF INVENTION: OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \mathbf{\mu}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Physication 6071730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
  FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-14)
                                                                                                                                                                                                                                                                                                                                                                                           : Sterne, Ker
1100 New York
 (202)
R SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perrimon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Brand, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-JAN-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  poth
  371-:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3.32e-06
14.00
100.00%
100.00%
100.00%
                                                      NUMBER:
                                                                              Lawrence
                                                                                                                                                                                                                                                                                                                                                                                                                                Howard
Cell Ab
: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-470-349-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                                                                                                                                                                                                                                                                       Kessler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08475610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             33,851
ER: 0609.3030001
                                                    35,086
3R: 0609.
                                                                                                                                                                                                                                                                                                                                                                                           Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6071730bert
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ablation
                                                                                                                                                                                                                                                                                                                                                                                         Goldstein & For
                                                     3080004/MAC/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Using
                                                                                                                                                                                                                                                                     Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                               Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                       Fox
te 600
                                                                                                                                                                                                                                                                     #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
14
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ribozymes
```

```
Percent Si
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
PCT-US92-00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Pred. No.:
                                                        Alignment Pred. No.:
                                                              CORRESSEE: Sterne, New-STREET: 1225 Connecticut Avenue, N STREET: 1225 Connecticut Avenue, N CITY: Washington STATE: DC COUNTRY: USA ZIP: 20036
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC Compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PATENTIN Release #1.0, CURRENT APPLICATION NUMBER: PCT/US92/0027 FILING DATE: 19920116
CLASSIFICATION AJS
PRIOR APPLICATION DATA: APPLICATION UMBER: US 07/642,33( FILING DATE: 17-JAN-1991 ATTORNEY/AGENT INFORMATION: NAME: Goldstein, Jorge A REGISTRATION NUMBER: 29,021 REFERENCE/DOCKET NUMBER: 0609.34 TELEPHONE: (202)833-7533 TELEPHONE: (202)833-7533 TELEFAX: (202)833-8716; INFORMATION FOR SEQ ID NO: 14: SEQUENCE CHARACTERISTICS: LENGTH: 130 bases
TYPE: NUCLBIC ACID STRANDEDNESS: both TOPOLOGY: linear MOLECULE TYPE: DNA PCT-US92-00277-14
  Query
DB:
                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-
                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-475-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLIC
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 130 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matc1
              ocal
Matcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ICANT: Brand, Andrea
ICANT: Perrimon, Norbe
E OF INVENTION: Cell /
ER OF SEQUENCES: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      imilarity:
l Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CANT:
CANT:
CANT:
OF IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          610-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14, Applicat INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application PC/TUS9200277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Haseloff, James
Goodman, Howard M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ×
3.32e-06
14.00
100.00%
100.00%
100.00%
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.32e-06
14.00
100.00%
100.00%
100.00%
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-475-610-14 (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Norbert
Cell Ablation Using
                                                                                                                                                                                                                                                                                                                          PCT/US92/00277
                                                                                                                                                                                                           29,021
R: 0609.3496604
                                                                                                                                                                                                                                                                                                                                                                                                                                                Goldstein & enue, N.W.,
                                                                                                                                                                                                                                                                                                                                             .
0,
                                                                                                                                                                                                                                                                             330
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gарв:
                                                                                                                                                                                                                                                                                                                                                Version #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Κ٦
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Trans-Splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suite
                                                                                                                                                                                                                                                                                                                                                 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
  130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 130
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ribozymes
```

· 1985年196、1985年198、1985年14日 - 1985年14日 - 1

The state of the s

us-09-85

```
Percent .
Best Loc.
Query Ma
                                                                                   RESULT
US-08-(
                                                                                                                                                                                                                                                        Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-
                                                                                                                                             Ş
                                                                                                                                                                       -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
PCT-US92-00278-14
; Sequence 14, Application
; GENERAL INFORMATION:
                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/US92/00: FILING DATE: 19920116
CLASSIFICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,3: FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
NAME: Goldstein, Jorge A
REGISTRATION NUMBER: 29,021
REFERENCE/DOCKET NUMBER: 0609.3:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)833-7533
TELEFAX: (202)833-8716
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 bases
TYPE: NUCLEIC ACID
STRANDEDNESS: Single
                                                                                                                                                                                                                                                                                           TOPOLOGY: L
MOLECULE TYPE:
CT-US92-00278-14
                                  Sequence 11, Application Patent No. 5641673
GENERAL INFORMATION:
APPLICANT: Haseloff,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Haseloff, James
APPLICANT: Goodman, Howard M.
TITLE OF INVENTION: Trans-Splicing Ri
NUMBER OF SEQUENCES: 51
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldste
STREET: 1225 Connecticut Avenue, N.
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ve
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -60
                                                                                                                                                                       60
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                       ent Similarity:
Local Similarity:
/ Match:
                                                                              r 12
-090-193-11
                                                                                                                                                                      857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   857-
                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                   Scores:
                                                                                                                       ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U
                                                                                                                       Ü
                                                                                                                                             \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                    1225 Connecticut Avenue, N.W.,
Haseloff, Jame
Brand, Andrea
Perrimon, No.
Goodman, Howar
                                                                                                                                                                     (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Haseloff,
                                                                                                                                                                                                                                                                                                                  Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   лмыER: PCT/US92/00278
19920116
                                                                                                                                                                                                                                                                                                       Nucleic
                                                                                                                                                                     ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ×
                                                                                                                                                                                            3.32e-06
14.00
100.00%
100.00%
100.00%
5
                                                                                                                                                                      PCT-US92-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT-US92-00277-
No. 5641673bert
Howard M.
                                                                       US/08090193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC/TUS9200278
                                     Jame
                                                                                                                                                                                                                                                                                                       Acid
                                                                                                                                                                      00278
                                                                                                                                                                                                                                                                                                                                                                                                                            .3476604
                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                       <u>1</u>4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ribozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version
                                                                                                                                                                     (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130)
                                                                                                                                                                      130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ŗ٦
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       k Fox
Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                             130
14
0
0
                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14
                                                                                                                       94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94
```

```
RESULT 13
US-08-488-031-1
; Sequence 11, .
; Patent No. 584
; GENERAL INFORA
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
FAPPLICANT:
OF INVENTIBLE OF INVENTED OF 
AGA

ATION:

ATION:

APPLICANT: Haseloff, James

APPLICANT: Perrimon, No. 5849548bert

APPLICANT: Goodman, Howard M.

TITLE OF INVENTION: Cell Ablation Using Transport of Sequences: 56

CORRESPONDENCE ADDRESS:

ADDRESSE: Sterne, Kessler, Gold STREET: 1100 New York Avenual City: Washington

STATE: D.C.

COUNTRY: U.S.A.

ZIP: 20005

COMPUTER RFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 56

CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein STREET: 1100 New York Avenue, Suite 60 CITY: Washington STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PATENTION DATA:
APPLICATION NUMBER: US/08/090,193
FILING DATE: 23-DEC-193
CLASSIFICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/ACENT INFORMATION:
NAME: Cimbala, Michele A.
REGISTRATION NUMBER: 33,851
REFERENCE/DOCKET NUMBER: 0609.308000:
TELEPHONE: (202) 371-2540
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 131 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
US-08-090-193-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -60-Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.34e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-090-193-11 (1-131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ablation Using Trans-Splicing Ribozymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goldstein & 
, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               080001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                           in & Fo
                                                                                                                                                                                                                                                                                                                          Trans-Splicing
                                                                                                                                                                                                            Fox:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     131
0
0
0
                                                                                                                                                                                                                                                                                                                            Ribozyme
```

```
Alignment Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                 us-
                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 11:
                                                                                                                                                                                                                                                                                         Sequence 11 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 08/090,193
FILING DATE: 23-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00277
FILING DATE: 16-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/642,330
FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                  09-
                                                                                                                                                                                                                                                                                                                08-486-569-11
                                                                                                                                                                                                                                                                                 GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 131 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
CURRENT APPLICATION DATA APPLICATION NUMBER: UPFILING DATE: 07-JUN-1 PRIOR APPLICATION DATA: APPLICATION NUMBER: 01 FILING DATE: 23-DEC-1
                                                                                                                                                                                                                                                                                                                                                                                                                                  Local S
y Match:
                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                        APPLICANT:
TITLE OF I
                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS
                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                            NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                 857-
                                                                                                                                                  ADDRESSEE: Sterne
STREET: 1100 New
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   488-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SOFTWARE:
                                                                                                                                                                                                                                                                                                                              14
                                                                                                                              ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                    SOFTWARE:
                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                 841-4
                                                                                                                                                                                                                                                                                                    11,
                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                    54
                                                                                                                                                                                                                                                                                                                                                                          \vdash
                                                                                                                              20005
                                                                                                                                                                                                                                                                                           5863774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION
                                                                                                                                                                                                                                                                                                                                                                 ATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGA
                                                                                                                                                                                                          INVENTION: SEQUENCES:
                                                                                                                                                 D.C
                                                                                                                                                                          1100 New York
                                                                                                                                                                                                                                                                                                                                                                                                 (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PC
SYSTEM:
                                                                                                                                                                                                                                        Perrimon,
                                                                                                                                        U.S.A.
                                                                                                                                                                                                                               Goodman,
                                                                                                                                                                                                                                                        Haseloff, Jame
Brand, Andrea
                                                                      PatentIn Release
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Release
                                 MBER: US/08/486,
07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MBER: US/08/488,031
07-JUN-1995
 MBER: 08/090,193
23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                                                                                                                                      3.34e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                          , Howard
Cell At
: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pc-DOS/MS
                                                                                                                                                                                                                                                                                                                                                                                                 US-08-488-031-11
                                                           DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DATA:
                                                                                                                                                                                                                                              No.
                                                                                                                                                                                    Kessler,
                                                                                                                                                                                                                                                                                                       US/08486569
                                                                                                                                                                                                                                                                    James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35,086
R: 0609.3080002/MAC/LBB
                                                                                                                                                                          Avenue,
                                                                                                                                                                                                                      Ablation Using
                                                                                                                                                                                                                                             5863774bert
                                                                    #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -DOS
                                                                                                                                                                        Goldstein & Fo
                                               ហ
                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                               69
                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                 (1-131)
                                                                                                                                                                                                                      Trans-Splicing
                                                                                                                                                                         Fox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #1.
                                                                      #1.
                                                                                                                                                                                                                                                                                                                                                                                                                        131
14
0
0
                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                    95
                                                                                                                                                                                                                        Ribozymes
```

```
RESULT 15
US-08-488-0
; Sequence
; Patent No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent |
Best Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : 8G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-486-
                                                                                        COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, \
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,027
FILING DATE: 07-JUN-1995
PRIOR APPLICATION NUMBER: 08/no^
FILING DATE: 23-r-^
PRIOR APPLICATE: 23-r-^
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 11:
                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL
                                                                                                                                                                                                                                                                    APPLICANT: GOOD TITLE OF INVENT: NUMBER OF SEQUENCE ADDRESSEE: SI STREET: 1100 CITY: Washing STATE: D.C. COUNTRY: U.S
                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nt Similarity:
Local Similarity:
Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPL
FILI
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                         ATTORNEY/AGENT INFORMATION:
                                                               APPLICATION NUMBER: FILING DATE: 16-JAJ
PRIOR APPLICATION DAT
                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 17-JAN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 131 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
                                       APPLICATION | FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    • •
                                                                                                                                                                                                                                                                                                                                                             CANT: Brand, Andrea
CANT: Perrimon, No. 5
CANT: Goodman, Howard
OF INVENTION: Cell F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           569-11
                                                                                                                            ING DATE: 07-JUN-1995
APPLICATION DATA:
                                                 ING DATE: 16-JAN-APPLICATION DATA:
JICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                          11, Application US/08488027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NG DATE: 16-JA
: Bugaisky, Lawrence B. STRATION NUMBER: 35,086
                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                  OF SEQUENCES:
                                                                                                                                                                                                                                                                                              Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGGACAAATCTGAATCAACCAGTGCTGGTCGTAACCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                               1100 New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                 Haseloff,
                                                                                                                                                                                                                                                                                                             Sterne, Kessler, G
10 New York Avenue,
                                                                                                                                                                                                                                                                                                                                      ADDRESS:
                                        17-JAN-1991
                                                                            16-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3.34e-06
14.00
100.00%
100.00%
100.00%
2
                                                                                                                                                                                                                                                                                                                                                  , Howard M.
Cell Ablation Using Trans-Splicing
: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-486-569-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34e-06
                                                                                                                                                                                                                                                                                                                                                                                                                  James
                                                                                         PCT/US92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT/US92/00277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 07/642,330
                                                    S
                                                                                                                                                                                                                                                                                                                                                                                        5866384bert
                                                    07/642,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0609.3080006/MAC/LBB
                                                                                                                                                                                                                                                                                                             Goldstein & Fox
, N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
                                                                                                                                                                                             Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     131
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                  Ribozymes
```

```
REFERENCE/DOCKET NUMBER: 0609.3080003/MAC/LBB
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 131 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
US-08-488-027-11
                                                                                                 Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                         멍
                                                         Ş
Search completed: I Job time : 68 secs
                                                                               US-09-857-841
                                       54
4
                                                                                -4
                                      (1-14)
          December
                                                                               ×
                                                                                                  3.34e-06
14.00
100.00%
100.00%
100.00%
                                                                              US-08-488-027-11 (1-131)
        5,
          2004,
           11:11:50
                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                    131
14
0
0
                                         95
                                                           14
```

Run

```
Title:
Perfect s
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Command line parameters:
-MODEL=frame+ p2n.model -DEV=xlh
-Q=/cgn2 1/USPTO spool/US09857841/runat 03122004 160614 19170/app_query.fasta-DB=Published Applications NA -QFMT=fastap -SUFFTX=olip2n.rnpb -MINMATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=oligo
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR_SCORE=quality -THR_MIN=1
-ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXLEN=200000000 -USER=US09857841 @CGN 1 1 480 @runat 03122004 160614 19170
-NCPU=6 -ICPU=3 -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100
-LONGLOG -DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              вize:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq
Published_Applications_NA:*

1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*

3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*

4: /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*

5: /cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*

6: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*

7: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*

9: /cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*

10: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*

11: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*

12: /cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq:*

13: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

14: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

15: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*

16: /cgn2_6/ptodata/2/pubpna/US10D_PUBCOMB.seq:*

17: /cgn2_6/ptodata/2/pubpna/US10D_PUBCOMB.seq:*

18: /cgn2_6/ptodata/2/pubpna/US10D_PUBCOMB.seq:*

19: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-857-841-4
14
1 MDKSESTSAGRNR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xgapop
Ygapop
Fgapop
Delop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3694831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OLIGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           first 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2747406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          frame_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09:48:28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               parameter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _plus_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Search (without a 219.166 Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ch time 351 Se

ut alignments)

Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.199
```

Pred. score and is

No. is the nu greater than s derived by a

number of results an or equal to the analysis of the t

predicted by chance secore of the result total score distribut

to hav being tion.

have

ve a printed,

μ. Θ

Word

RESULT US-10-0 ; Seque ; Publi ; GEN ;			C 4	44	4.			ωu			w c		w		ึง	N		2		งง	<b>,</b> ,	ىر ب	ر بر			نبر نبر							† !	Resul No
T 1 -011-033- uence 5, lication   ENERAL IN APPLI NUMBE CORRE COMPU																										1 2 7				щ	ا فيو د	3 14		t score
5 Applicat No. US20 FORMATIC CANT: BC CANT: BC CANT: BC Re CCANT: CA CCA CF INVE Re CCA CCA CCA CCA CCA CCA CCA CCA CCA CC		50.	50.	50.	ı 50.	50.	50.	50.	л U	50.	50.	ຫ ຫ 0 0	50.	ຫ ຫ <b>ດ</b> .	50.	50.	, u	50.	υ o o .	50.	50.	л О	50.	ກ ຫ ວ 0	50.	ភ ភ ១០. ០	50.	ຫ ຫ 0 0	50.	57.	100.	99	80	Query
ion US/10 020124286) N: eshore, M: Master, J icoli, Dav ynolds, Ja ynolds, Ja Ynolds, Ja Ynolds, Ja Ynolds, Ja Ynolds, Ja Ynolds, Ja Cu Cu UENCES: 1: Cu Cu UENCES: 1: Cu Cu UENCES: 1: Cu US.A. 11inois U.S.A. 89		57	Ϋ́	03	566	Б	471	71	4 7	323	38	956 071	02	Մ Մ Մ	1 10	19	0 7 7	15	57 A 44 ~	70	63	1 09 8	09	7 A	52	316 408	79	<u>ა</u> გ	07	92 92	9 2			Length D
00110 6A1 Maury J. Ru John m J Tants hicumb		Φ	σ	თσ	νŴ	ഗം	4 1	·	л <	ıν	0	0 4	9	ο τ	וסו	ς c	ໝ ເຕ	Φ	տ α	ഗ	ο (	y c	(L)	20		18 10	1	თ დ	S O	7 6	ا درا د		ا د ا د	: B : : I
L ssell Resistant to C Strains er Mosaic Virus en Mosaic Virus Plaza, 180 N. Stetson,	ALIGNMENTS	-10-425-115-1387	-10-282-122A-7523	-10-343-710-78 -10-282-122A-263	-10-369-493-44	-10-269-493-3577	-10-091-504-45	09-764-869-455	-10-43/-963-6738	-10-369-493-32	-09-822-846-464	-10-425-114-1 -10-198-846-1	-10-424-599-1109	-10-126-103-37 -10-431-096-37	-10-424-599-4268	-10-369-493-377	-10-156-761-4748 -10-425-115-6192	-10-425-115-429	-10-425-115-5966 -10-156-761-7305	-10-029-386-1136	-10-424-599-3174	-10-027-632-23445 -10-029-386-11750	-10-027-632-2344	09-864-761-15219 -10-425-115-17448	09-998-598-1555	25-115- 18-995-	09-960-352-7184	-10-425-115-66 -10-424-599-94	-10-424-599-1409	-10-011-033-9 -10-437-963-312	-10-011-033-3	-10-011-033-	-10-011-03	
of Suite 4700		equence 1387	equence 7523,	ence 26385,	equence 44194,	equence 35770,	equence 455,	quence 455, A	equence 6/382,	equence 32000	equence 464,	equence 1391 equence 1082	equence 1109	ω u	equence 4268	equence 3773	equence 4748	equence 4294	equence 7309	equence 1136	equence 317	equence 234 equence 117	equence 23445	equence 15219, Secuence 174482	quence 1555, Ap	Sequence 46484, A Sequence 34460, A	quence 7184, Ap	Sequence 66023, A Sequence 94618, A	equence 140904,	equence 9, Apprequence 3120, A	quence 3, App	Sequence 14, Appl	quence 5, Ap	Description

```
Alignment
Pred. No.:
Score:
Percent Si
                                                                                                                                                                                                                                                                                                                               Best I
Query
DB:
                                                                                                                                                                          RESULT 2
US-10-011-033-1
; Sequence 1, Application US/1001103;
; Publication No. US20020124286A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                               र्ठ
                                                                                                                                                                                                                                                                                                       0S-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 771 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: Cucumber mosaic v
                                                                                                                                                                                                                                                                                                                                                                                                                            10-
                                                                                                                                                                                                                                                                                                                                         Local S.
y Match:
                                                                                                                                                                                                                                                                                                                                                                                        No : :
                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE 011-033-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Vers
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                   Similarity:
cal Similarity:
                                                                                                                                                                                                                                                                                                       7-841
                                                                         NUMB!
                                                                                                              TITLE
                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                    Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
LOCATION: 3..660
OTHER INFORMATION: /codon_start= 3
/function= "ENCAPSIDATES VIRUS RNA"
/product= "COAT PROTEIN"
/gene= "CP"
/number= 1
BER OF SEQUENCES: 15
RESPONDENCE ADDRESS:
ADDRESSEE: Rockey, 1
STREET: 2 Prudentia
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
                                                                                                                                                                                                                                                                    MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN:
                                                                                                              ဝူ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard
                                                                                                                                                                                                                                                                                                       (1-14)
                                                                                                        McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                       DESCRIPTION:
                                                                                                                                                                    Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٧-
                                                                                                                                                                                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                                             9.49e-06
14.00
100.00%
100.00%
100.00%
                                                Rockey, Milnamow Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34
                                                                                                                                                                                                                                                                                                       US-10-011-033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floppy
                                                                                                Plants Resistant
Cucumber Mosaic
                                                                                                                                                                   Maury
                                                                                                                                                                                                                                                                                                                                                                                                                                       "COAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       compatible
compatible
PC-DOS/MS-DOS
                                                                                                                                                                                                                                                         disk
                                                                                                                                                                                                                                                                                                                                                                                                                                        IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                       PROTEIN"
                                                                                                                                                                                                                                                                                                       ភ
                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                       (1-771)
                                                & Katz,
                                                                                                virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Version
                                                , Ltd.
Stetson,
                                                                                                             Strains
                                                                                                                                                                                                                                                                                                                               771
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #1
                                                                                                                                                                                                                                                                                14
                                                                                                                                                                                                                                                          44
                                                 Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W
                                                                                                              Off.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                4700
```

```
US-10-011-033-14
; Sequence 14, Application US/10011033
; Publication No. US20020124286A1
: GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                      US-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred
                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
                                                                                                                                                                                                                                                                                                                                                                                       -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                      857-
                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-NO. US20020124286A1-2001
CLASSIFICATION NUMBER: US/08/875,233
FILING DATE: 26-UN-1997
AFTIORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5400
TELEFAX: 312-616-5460
ORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 772 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow & Katz, Lt
STREET: 2 Prudential Plaza, 180 N. St
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: CDS
LOCATION: 3..660
SEQUENCE DESCRIPTION: SE-033-1
                                                                                                                                    SZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OBES
                                            Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \mathfrak{Q}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \aleph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                                                                                                           ITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RIGINAL SOURCE:
ORGANISM: Cucumber Mosaic
INDIVIDUAL ISOLATE: V-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                      41-4
                                                                                                                                                                                                                                                                                                                                   Ü
                                                                                                                                                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                                                                                                   ဝ္ဂ
                                                                                                                                                           NT: Boeshore, Maury L
McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
Carney, Kim J
Cucumber Mosaic Vi
                                                                                                                                                                                                                                                                                                                                                                                     (1-14)
                                                                                                                                                                                                                                                                                                                                                                                     x US-10-011-033-1
                                                                                                                                                                                                                                                                                                                                                                                                              9.5e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NO:
                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Virus
                                                                                                                                                                                                                                                                                                                                                                                     (1-772)
                                                                                                                                                              Virus
                                                                                                           , Ltd.
Stetson,
                                                                                                                                                                           Strains
                                                                                                                                                                                                                                                                                                                                                                                                              772
14
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1.30
                                                                                                           Suite
                                                                                                                                                                           of
f
                                                                                                             4700
```

```
RESULT 4
US-10-011-033-3
; Sequence 3, Application US/1001103;
; Publication No. US20020124286A1
; FURTHER GENERAL INFORMATION:
GENERAL INFORMATION:
Thus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best
                                                                                                                                                                                                                                                                                                                                                                                                                                -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 772 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ent Similarity:
Local Similarity:
Y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             011-
                                                                                                                                                                                                                                                                                                                                                                                                                               857-841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Versic CURRENT APPLICATION NUMBER: US/10/011,033 FILING DATE: 13-No. US20020124286A1-200 CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA: APPLICATION NUMBER: US/08/875,233 FILING DATE: 26-JUN-1997 ATTORNEY/AGENT INFORMATION:
COUNTRY: U.S.A.
ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, V

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/011,033

FILING DATE: 13-No. US20020124286A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 772 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
                                                                                                                            NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, N
STREET: 2 Prudential
CITY: Chicago
STATE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
L-033-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                            Ü
                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                          INDIVIDUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                      OF.
                                                                                                                                                                                                                                                                                                                                                                                                                              (1-
                                                                                                                                                                                                                      Carney, R
INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DESCRIPTION: :
                                                                                                                                                                                                                                                                                                                                                                                                                               14)
                                                                                                                                                                                                                                Boeshore, Maury I
McMaster, J. Rus
Tricoli, David M
Reynolds, John F
Carney, Kim J
                                                                                                                                                       3E: Rockey, Milnamow
2 Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cucumber Mosaic
L ISOLATE: A35
                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.5e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-011-
                                                                                                                                                                                                                   Plants
                                                                                                                                                                                                        Plants Resistant
Cucumber Mosaic \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ
                                                                                                                                                                                                                                                                        Russell
  US/10/011,033
US20020124286A1-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                               033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ë
Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                              -14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Virus
                                                                                                                                                        & Katz,
180 N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14:
                                                                                                                                                                                                                                                                                                                                                                                                                               (1-
                                                                                                                                                                                                          t to C
                                                                                                                                                                                                                                                                                                                                                                                                                               772)
                                        Version
                                                                                                                                                       , Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rsion
                                                                                                                                                                                                                      Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                          0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1
                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                                                             44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30
                                         30
                                                                                                                                                         Suite
                                                                                                                                                                                                                      of.
                                                                                                                                                         4700
```

멍

ঠ

```
RESULT 5
US-10-011-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best I
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5460
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 792 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 9, Application US/10011033 Publication No. US20020124286A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, N
STREET: 2 Prudential
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1
CURRENT APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2001
CLASSIFICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HYPOTHETICAL: NO ANTI-SENSE: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                              Ω
                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \Xi
                                                           P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EQUENCE
033-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             033-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MetAspLysSerGluSerThrSerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: CDS
LOCATION: 3..66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN: v-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OH
OH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carney, K
INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tricularian Jorna
Reynolds, Jo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   McMaster, J. Rus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9.7e-06
14.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                 : Rockey, Milnamow Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CUCUMBER MOSAIC VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-011-033-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucumber: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Maury L
J. Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plants Resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           John F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                          Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-792)
                                                                                                                                                                                                                                                                                                                                                                                                                  & Katz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    t to C
Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTAACCGTCGA
                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                  Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   792
14
0
0
                                                                                                                                                                                        #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44
                                                                                                                                                                                         30
                                                                                                                                                                                                                                                                                                                                                                                                                     Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Of
f
                                                                                                                                                                                                                                                                                                                                                                                                                   4700
```

X The state of the

```
RESULT 6
US-10-437-963-3
; Sequence 3120
                                                                 Alignment
Pred. No.:
Score:
                                                                                                          APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Wu, Wei
APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Mol
TITLE OF INVENTION: Plants and Uses Thei
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 3120
LENGTH: 792
TYPE: DNA
ORGANISM: Oryza sativa
FEATURE:
OTHER INFORMATION: Clone ID: PAT_MRT4530
US-10-437-963-3120
                      Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent
Best Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment
Pred. No.:
Śn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
DB:
                                 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-0
                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                             Publication No. US200 GENERAL INFORMATION: APPLICANT: La Rosa, APPLICANT: Kovalic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEPHONE: 312-616-5460
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 960 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TYPE: TYPE: cDNA
HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: CUCUMBER MOSAIC V:
STRAIN: STRAIN C
-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-011-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ent Similarity:
Local Similarity
Y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -857-
 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:

NAME/KEY: CDS

LOCATION: 1..658

SEQUENCE DESCRIPTION: SI
1-033-9
  841-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841-
                                                                                        Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores
                                                                                                                                                                                                                                                                                                                                                                3120, Application US/1043 on No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                    MetAspLyss
|||||||||||
                                                                                                                                                                                                                                                                                                                                La Rosa, Thomas
Kovalic, David
                                                                                                                                                                                                                                                                                                                                                                                       3120
  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGACAAATCTGAATCAA
                                                                                                                                                                                                                                                                                                                Kovalic, par
 1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .14)
  14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ≺
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ×
×
                                                                                                                                                                                                                                                                                                                                                                                                                                     16.4
8.00
100.00%
100.00%
57.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.00135
12.00
100.00%
100.00%
100.00%
85.71%
 US-10-437-963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-
                                                                                                                                                                                                                                                                                                                                 <del>٢</del> :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     011-033-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OH
                                                                                                                                                                                                                                                                                                                                                                                                                           CCAGTGCTGGTCGTAAC
                                                                                                                                                                                                                                      : Acid Molecules and Other Molecules
Uses Thereof for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IJ
                                                                                                                       MRT4530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ë
S
                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
 3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VIRUS
                                                                                                                                                                                                                   963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     960)
(1-
                                                                                                                         _102831C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                          36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           960
12
0
                       00000
                                                                                                                                                                                                                                                   Associated
                                                                                                                                                                                                                                                    With
```

```
SEQ ID NO 66023

LENGTH: 166

TYPE: DNA

ORGANISM: Zea mays
FEATURE:
NAME/KEY: unsure
LOCATION: (1)..(166)
OTHER INFORMATION: unsure
FEATURE:
OTHER INFORMATION: Clo
        Alignment Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                             Score:
Percent Si
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 7
US-10-424
                                                                                                                                                                                                                                                                                                                                                                                       Alignment S
Pred. No.:
  Perc
                                                                                                                                                                                                                                                             us-
                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                            -SU
                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                  us-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Publicati
GENERAL J
                                                                                                                                                                                                                                           Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ
                                                                                                                                                                                                                                    GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
TITLE OF IN
TITLE REFEREI
CURRENT APP.
CURRENT FIL
                                                                                                                                                  TITLE OF
TITLE OF
FILE REF
CURRENT
CURRENT
                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF
                                                                                                                                                                                                                                                                                                                            09-85
                                                                                                                                                                                                                                                             10-425-
                                                                                                                                           NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: I
ORGANIS
FEATURE
  Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH
                                                                                                                                                                                                                                                                                                                                                     Socal
Match
                                                                                                                    JCANT: La Rosa Thomas J
JCANT: Kovalic David K
ICANT: Cao Yongwei
3 OF INVENTION: Soy Nucleic Acid Molecu
3 OF INVENTION: Plants and Uses Thereo
REFERENCE: 38-21(53223)B
NT APPLICATION NUMBER: US/10/424,599
NT FILING DATE: 2003-04-28
3 OF SEQ ID NOS: 285684
NO 140904
"H: 107
                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                            7-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4-
                                                                                                                                                                                                 3-115-66023, Application US/10425115

ce 66023, Application US/10425115

stion No. US20040214272A1

L INFORMATION:

CANT: La Rosa, Thomas J.

CANT: Kovalic, David K.

CANT: Kovalic, David K.
                  ••
imilarity:
                                                                                                                                                                                                                                                                                                                                                             imilarity:
l Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                           SM: Glycine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           734
                                                                                                                                                                                                                                                                                                                            841-4
                                                                                                                                                                                                                                                                                                                                                                                                                  599-140904
                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                         W
                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9-140904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerGluSerThrSerAlaGlyArg
                                                                                                                                                                                                                                                                                         AAATCAGAATCGACTTCTGCT
                                                                                                                                                                                                                                                                                                  LysSerGluSerThrSerAla
                                                                                                                                                                                                                                                                                                                            (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                             max
                                                                                                                                                                                                                                                                                                                                                                                                                           Clone
                                                                       unsure at
                                                                                                                                                                                                                                                                                                                           x US-10-424-599-
                                                     Clone
                                                                                                                                                                                                                                                                                                                                           35.2
7.00
100.00%
100.00%
50.00%
50.3
7.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                           ID:
                                                     ID:
                                                                                                                                                                                         Acid Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                         PAT_MRT3847_98246C
                                                    MRT4577_160212C.1
                                                                       all
                                                                                                                                                                                                                                                                                          74
                                                                                                                                                                                                                                                                                                          φ
                                                                       Þ
                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            757
                                                                       locations
                                                                                                                                                                                                                                                                                                                            140904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Molecules and Other Molecules
Thereof for Plant Improvement
                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                           (1-107)
                                                                                                                                                                                         Other
         166
7
                                                                                                                                                                                                                                                                                                                                                                               107
  0
                                                                                                                                                                                                                                                                                                                                              0000
                                                                                                                                                                                         Molecules
                                                                                                                                                                                         Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Associated
                                                                                                                                                                                          With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             With
```

```
RESULT 9
US-10-424-599-94618
; Sequence 94618, Appli
; Publication No. US200
; GENERAL INFORMATION:
Alignment
Pred. No.:
Score:
Percent Si
                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Pred No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                     Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best I
Query
DB:
                                                                                                                                                                                                                                                                            RESULT 10
US-09-960-352-7184
                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                              US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-857-841
                                                                                                                                                                                                                                                       Sequence 71 Patent No.
                                                                                                                  SEQ
                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                         APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED
TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic
TITLE OF INVENTION: Plants and
FILE REFERENCE: 38-21(53223)B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/424, CURRENT FILING DATE: 2003-04-28 NUMBER OF SEQ ID NOS: 285684 EQ ID NO 94618 LENGTH: 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
OTHER INFORMATION:
10-424-599-94618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: La Rosa
                                                         TYPE: DNA
ORGANISM: Bos taurus
OTHER INFORMATION: Clone
)9-960-352-7184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Glycine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                 Match:
                                                                                                                 ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match:
                                                                                                                                                                                                                                                                                                                                                              857-841
Similarity:
                                   Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity:
                                                                                                                                                                                                                                                       7184, Application US20020137139A1
                                                                                                                                                                                                                                                                                                                 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ს</u>
                                                                                                      7184
279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
                                                                                                                                                                                                                                                                                                                ThrSerAlaGlyArgAsnArg
                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             La Rosa Thomas
Kovalic David
Zhou Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTGCGGGAAGAATAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  erAlaGlyArgAsnArgArg
|||||||||||||
                                                                                                                                                                                                                                                                                                                                                             (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/10424599 US20040031072A1
                                                                                                                                                                                                                                                                                                                                                               14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   max
                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clone
                                                                                                                                                                                                                                                                                                                                                                                    7.00
100.00%
100.00%
50.00%
76.8
7.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.00%
50.00%
18
                                                                                                                                                                                                                                                                                                                                                              US-10-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-
                                                                    ID:
                                                                                                                                                                                                                                                                    US/0996035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          メロ
                                                                                                                                                                                                                                                                                                                                                              424-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  425-115
                                                                    31-LIB3057-014-Q1-K1-H3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT_MRT3847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acid
Uses
                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                                                                                                                                                 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -66023
                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                              94618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Molecules and Other Molecules
Thereof for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56451C.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -166)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plant
279
7
0
                                                                                                                                                                                                                                                                                                                                                                                     00007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         999
                                                                                                                                                                                    WITH LACTATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Associated With
                                                                                                                                                                                    AND
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SU-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
```

```
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
US-10-425-1
                                                                                                                                                                                                                                                                                                         Query
DB:
 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
DB:
                                                       ; ORGANISM: US-09-918-995
                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                           Best Local
                                                                                                                                                                                                                                                                                                                                                      Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best
                             Pred.
                                     Alignment
                                                                                                                                                                                                                        US-09-918-
                                                                                                                                                                                                                                                                                       US-09-
                                                                                                                                                                                                                                                                                                                                                              Alignment
                                                                                                                                                                                                                                                                                                                                  Percent
                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                           Sequence
Publicati
GENERAL J
                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                           SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Publicat
                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 31
TYPE: DNA
ORGANISM:
FEATURE:
OTHER INFO
                                                                                                                    FILE REF
CURRENT
CURRENT
PRIOR AP
PRIOR FI
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF
TITLE OF
FILE REF
CURRENT
CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                   NUMBER OF SOFTWARE
                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF
                                                                                                                                            APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC
TITLE OF INVENTION: FROM VARIOUS
FILE REFERENCE: 20411-756
CURRENT APPLICATION NUMBER: US/09/
                                                                         TYPE: [
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Match
 Local
                            No.:
                                                                                                                                                                                                                                                                                                                  Matcl
                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                       85
                                                                                                                                                                                                                                                                                                                                                                                                                      ACANT: Zhou, Yihua
LICANT: Zhou, Yihua
LICANT: Cao, Yongwei
E OF INVENTION: Nucleic Acid Molect
E OF INVENTION: Plants
REFERENCE: 38-21(53222)B
ENT APPLICATION NUMBER: US/10/425,1
ENT FILING DATE: 2003-04-28
ER OF SEQ ID NOS: 369326
1 NO 46484
TH: 316
: DN'
                                                                                            ENT FILING DATE: 2001-07-30

APPLICATION NUMBER: US/09/918,995

FILING DATE: 1999-01-20

R OF SEQ ID NOS: 38054

PARE: FastSEQ for Windows Verein Alaen
           ß
                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                       7-
                                                                                                                                                                                                                                                                                                                       Similarity:
al Similarity:
 imilarity:
l Similarity:
                                                                        DNA
                                                       [SM: Homo e
                                    Score
                                                                                                                                                                                                     34460,
ion No.
                                                                                                                                                                                                                                                                                                                                                               Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841-4
                                                                                                                                                                                            INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46484, Application US/10425115 ion No. US20040214272A1
                                                                                                                                                                                                                                                                                       841-4
                                                                                                                                                                                                                                                                                                                                                                                 115-46484
                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity:
                                                                                                                                                                                                                       95-34460
                                                                                 34460
408
                                                                                                                                                                                                                                                                    Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ប
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -46484
                                                                                                                                                                                                                                                                                                                                                                                                            Zea
                                                                                                                                                                                                                                                 LysSerGluSerThrSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ThrSerAlaGlyArgAsnArg
                                                                                                                                                                                                                                                                                       (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-14)
                                                                                                                                                                                                      Application US/09918995 US20030073623A1
                                                                                                                                                                                                                                                                                                                                                                                                            mays
                                                                sapiens
                                                                                                                                                                                                                                                                                      ×
                                                                                                                                                                                                                                                                                                                                                                                          Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                        7.00
100.00%
100.00%
50.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
50.00%
9
105
7.00
100.0
                                                                                                                                                                                                                                                                                       US-10-425-115-46484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-960-352-7184
  000
                                                                                                                                                                                                                                                                                                                                                                                          ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Acid Molecules
                                                                                                                                                                                                                                                                                                                                                                                          MRT4577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                151
                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                     ø
                                                                                                                                                                 ACID
CDNA
Length:
Matches:
Conservative
Mismatches:
                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
Gaps:
                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                          _142399C.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  115
                                                                                                                                                                 SEQUENCES
LIBRARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-279)
                                                                                                                                                                                                                                                                                       1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and Other Molecules Associated With
          ive
                                                                                                                                                                                                                                                                                       316)
                                                                                                                                                                  ໙ ໙
                                                                                                                                                                           OBTAINED
 408
7
0
                                                                                                                                                                                                                                                                                                         316
7
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      000
```

```
Percent
Best Loc
Query Ma
DB:
                                                                                                                                                                                                                                                                                    RESULT 14
US-09-864
                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US RE
                                                                                                                                                                                                                                                                                                                                                              US-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -Sn
                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
US-09-998-9
Sequence
Patent No.
GENERAL
                                                            TITLE OF INVENTION: HUMAN GENOME-DERIVED STITLE OF INVENTION: GENE EXPRESSION ANALY FILE REFERENCE: Aeomica-X-1
CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 2000-10-04
PRIOR FILING DATE: 2000-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Stolk, John A.

APPLICANT: Xu, Jiangchun

APPLICANT: Chenault, Ruth A.

APPLICANT: Meagher, Madelein Joy

TITLE OF INVENTION: COMPOSITIONS AND METHODS

TITLE OF INVENTION: DIAGNOSIS OF COLON CANS

FILE REFERENCE: 210121.561

CURRENT APPLICATION NUMBER: US/09/998,598

CURRENT FILING DATE: 2001-11-16

NUMBER OF SEQ ID NOS: 2606

SOFTWARE: Corixa Invention Disclosure Databa
                                                                                                                                                                                                                                                               Sequence 19 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID N
SOFTWARE: Corixa I
SEQ ID NO 1555
LENGTH: 452
TYPE: DNA
ORGANISM: Homo 88
-09-998-598-1555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
  PRIOR PRIOR
                                 PRIOR
                                           PRIOR PRIOR
                       PRIOR
                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                           ent Similarity:
Local Similarity:
/ Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                              857-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match:
                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .3
-59
                                                                                                                                                                                                                                                                                     4-761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ce 1555, Applicat
No. US2002015092
L INFORMATION:
APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27 APPLICATION NUMBER: PCT/US01/00666 FILING DATE: 2001-01-30 APPLICATION NUMBER: PCT/US01/00667 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                              841-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                    87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \boldsymbol{\omega}
                                                                                                                                                                                                                                                               l-15219
5219, Application
US20020048763A1
                                                                                                                                                                                                                                       Penn,
                                                                                                                                                                                                                                                                                                                  GluSerThrSerAlaGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               997T
                                                                                                                                                                                                        Rank, David R.
Hanzel, David K
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerAlaGlyArgAsnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1555/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \widehat{\Box}
                                                                                                                                                                                                                                                                                                                                                              (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                           Sharron
                                                                                                                                                                                                                    David R.
l, David K.
                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                                                                                                  114
7.00
100.00%
100.00%
50.00%
                                                                                                                                                                                     IUMAN GENOME-DERIVED SINGLE GENE EXPRESSION ANALYSIS BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAATCGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ion
2A1
                                                                                                                                                                                                                                                                                                                                                              US-09-998-598-1555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                          Ω.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SD
                                                                                                                                                                                                                                                                         Sn
                                                                                                                                                                US/09/864,761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       918-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /09998598
                                                                                                                                                                                                                                                                          /09864761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        995
                                                                                                                                                                                                                                                                                                                    67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND METHODS FOR
                                                                                                                                                                                                                                                                                                                                        11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-408)
                                                                                                                                                                                                                                                                                                                                                                                                                  ive
                                                                                                                                                                                      EXON NUCLEIC MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THE
                                                                                                                                                                                                                                                                                                                                                                                                                             452
7
                                                                                                                                                                                                                                                                                                                                                                                  0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THERAPY
                                                                                                                                                                                                ACID
                                                                                                                                                                                                 PROBES
                                                                                                                                                                                                USEFUL
                                                                                                                                                                                                 FOR
                                                                                                                                       RESULT 15
US-10-425-115-;
Sequence 174;
Publication 1;
GENERAL INFOI
APPLICANT: 1
APPLICANT: 1
APPLICANT: 1
APPLICANT: 1
TITLE OF INT
TITLE OF INT
TITLE REFEREI
CURRENT APPLICANT: 1
Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                         Sn
                                                                                                                                                                                                                                                                                                                                                                                                                  Pred
                                                                                                                                                                                                                                                                                                                                                              : 8G
                                                                                                                                                                                                                                                                                                                                                                       Query
                                                                                                                                                                                                                                                                                                                                                                                            Percent
                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
                                                                                                            OES
                                                                                                           NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                          -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                 CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER
                                                                                               LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH
                                                                                                                                                                                                                                                                                                                                                                      Loca
Mat
                                                                                                                                                                                                                                                                                                                                                                                                                  NO
O
                                                                                                                                                                                                                                                                                                                                         57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AFAFAE
                                                                                                                                                                                                                                                                                                                                                                         C H
                                                                                                                                                                                                                                                                                                                                                                                                                  ••
                       Scores
                                                                                                                                                                                                                                                                                               38
                                                                                                                                                                                                                                                                                                                                          4
```

```
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; OTHER INFORMATION: (
US-10-425-115-174482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Homo:
FEATURE:
OTHER INFORMATIC
OTHER INFORMATIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity:
al Similarity:
                                                                                                                                 ANT: Zhou, Ylnuc
ANT: Zhou, Yongwei
ANT: Cao, Yongwei
OF INVENTION: Nucleic Acid Mo
OF INVENTION: Plants
REFERENCE: 38-21 (53222) B
NT APPLICATION NUMBER: US/10/
NT FILING DATE: 2003-04-28
NT FILING DATE: 369326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00661
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00670
APPLICATION NUMBER: US 60/234,687
FILING DATE: 2000-09-21
APPLICATION NUMBER: US 09/608,408
FILING DATE: 2000-06-30
APPLICATION NUMBER: US 09/774,203
FILING DATE: 2001-01-29
R OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00669
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00665
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00668
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00663
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
INFORMATION:
.761-15219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scores:
                                                                                                                       FILING DATE: OF SEQ ID NOS: O 174482 : 478
                                                                                                                                                                                                                                                                                      174482, Application US/10425115 ion No. US20040214272A1 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                               15-174482/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : Armomax
15219
464
                                                                                                                                                                                                                                        La Rosa, Luc...

Kovalic, Dav

Thou, Yihua
                                                                                                                                                                                                                                                                                                                                                                     (1-14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence Listing
                                                                                                                                                                                                                                                             Thomas
David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MAP TO AC011288.1
EXPRESSED IN FETAL
                                                                 Clone
                                                                                                                                                                                                                                                                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                     116
7.00
100.00%
100.00%
50.00%
9
119
7.00
                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-864-761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCT/US01/00664
                                                                   ID:
                                                                                                                                                                                                                                                             ሯ 5
                                                                                                                                                                                                                    Acid Molecules
                                                                                                                                                                            US/10/425,115
                                                                  MRT4577_90708C.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative
Mismatches:
Indels:
Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                            15219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LIVER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          vers.
                                                                                                                                                                                                                      and Other Molecules Associated With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ive:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ľ
478
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                     464
7
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n
```

Percent Similarity:
Best Local Similarity:
Query Match:
DB: Ś 멍 US-09-857-841-4 (1-14) Search completed: December Job time: 353 secs 243 x US-10-425-115-174482 100.00% 100.00% 50.00% 18 5 2004, 11:17:49 10 223 Conservative:
Mismatches:
Indels:
Gaps: (1-478)0000

This Page Blank (uspto)

Copyright

GenCore (c) 1993

version - 2004

5.1.6 Compugen

Ltd

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect s
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tota
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring
                                                                                                                                                                                                         Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -processing:
    ----
                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81Ze
     422420420426
                                                                                                                                                                                                                                                             Pred. Negative secore secore secore secore secore secore secore secone s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             dmun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
BC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8cor(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          table
                                                                                                                                                                                            Ŋ
                                                                                                                                                                                             Cor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq
seq
                                                                                                                                                                                                                                                               greater t
s derived
                                                                                                                                                                                                                                                                                         No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
     443111100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length:
length:
                                                                                                                                                                                                                                                                                                                  hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OLIGO
                                                                                                                                                                                           Query
Match
  100.0
100.0
100.0
100.0
85.7
50.0
50.0
50.0
42.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                          œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₩
                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10D_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -09-
                                                                                                                                                                                                                                                              the nur than ed by a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             atis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
20000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                             Ō
                                                                                                                                                                                                                                                                                          number
                                                                                                                                                                                                                                                               n or equal analysis c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ведв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7
   218
218
218
218
218
218
218
343
343
343
375
448
469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                            Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          fying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                             th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapext
                                                                                                                                                                                              D
   11551133
1155133
1155133
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ġ
                                                                                                                                                                                                                                                                                            m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chose
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
US-10-011-033-2
US-10-011-033-4
US-10-011-033-6
US-10-011-033-15
US-10-011-033-10
US-10-424-599-283746
US-10-425-114-51049
US-10-425-115-323368
US-10-425-115-323368
US-10-437-963-169865
US-10-424-599-236497
US-10-203-915A-131
US-10-203-915A-131
                                                                                                                                                                                                                                                               of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                             D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                             sults
the t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₩8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08:14:04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             en
                                                                                                                                                                                                                                     UMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          paramet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O
                                                                                                                                                                                                                                                             s predice score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                resi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           es
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 ; Search time 6 (without alignme 75.647 Million c
                                                                                                                                                                                                                                                              edicted by ore of the al score di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ers
                                                                                                                                                                                                                                                               the re di
                                                                                                                                                                                                                                                              chance t
result k
istributi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                             D
sequence
                                                                                                                                                                                                                                                              to have being tion.
                                                                                                                                                                               scripti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     econd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            updates/sec
                                                                                                                                                                                                                                                                                          have
                                                                                                                                                                                                                                                                                                                                                                             * * * *
                                                                                                                                                                                                                                                                           printed,
                                                                                                                                                                                             O
  2, Appli
4, Appli
6, Appli
15, Appli
10, Appl
283746,
51049, A
53499, A
53499, A
323368,
169865,
236497,
131, App
```

0,120,010	US-10-425-115-2870	272	42.9	<b>თ</b> 0	45
ე ტ	US-10-408-765A-260	ס נ	N	നം	
Seguenc	US-10-425-114-39110	 лυ		ם ת	
	US-10-282-122A-704	4	N	n 01	
Sequen	US-10-369-493-19842	N	2	ტ	
	US-10-437-963-11073	0	<b>N</b>	σ	
Sequenc	US-10-437-963-1961	9	2	ტ	
	US-10-425-115-28451	7	2	6	
Sequenc	US-10-425-115-33096	7	2	თ	
Sequenc	US-10-425-114-39432	σ	N	ი	
Sequenc	US-10-425-115-26107	S	N	ტ	
Sequenc	US-10-437-963-12179	ហ	<u>.</u>	ტ	
Sequen	US-10-437-963-11073	4		6	
Sequenc	US-10-425-114-58305	W	, V	თ	
Sequenc	US-10-437-963-10565	w	N	6	
Sequenc	US-10-437-963-1248	8		6	
Sequenc	US-10-425-114-59079	N	2	ტ	
Sequenc	US-10-425-115-29123	0		თ	
Sequenc	US-10-437-963-17762	0	N	თ	
Seguenc	US-10-437-963-10320	0	2	თ	
Sequenc	US-10-425-115-35695		N	ഗ	
Sequenc	US-10-425-115-24405		N	თ	
Sequenc	US-10-425-115-20560		N	σ	
Sequen	US-10-425-115-31123		2	თ	
Sequenc	US-10-424-599-14532		2	თ	
Segue	US-10-425-115-35282		2	თ	
	US-10-424-599-25638		<u>ب</u>	ტ	
Seguenc	US-10-425-115-28841		2	თ	
Sequen	US-10-425-115-31117			σ	
Sequenc	US-10-424-599-14541		<b>.</b>	თ	
nanhac	CO-TO-COS-STOR-TO			c	

## ALIGNMENTS

```
RESULT 1
US-10-011-0
; Sequence
; Publicati
; GENERAL
                                COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1
CLASSIFICATION: <Unknown>
PRIOR APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: 1:5- U M:517.
                                                                                                                                                                                                     NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow &
STREET: 2 Prudential Plaza, 1
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
ZIP: 60089
                                                                                                                                                                                                                                                                                    SN
               \exists
                                     Þ
                                                                                                                              \overline{\mathbf{G}}
                                                                                                                                                                                           Ŏ
                                                                                                                                                                                                                                                                                                                         H
                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                             7
                                                                                                                                                                                                                                                                                                                                                                                         033-2
2, Application US/10011033
ion No. US20020124286A1
L INFORMATION:
                                                                                                                                                                                            ZIP:
OMPUTER H
                                                                                                                                                                                                                                                                                                                         ITLE
NAME: Lisa V. Mueller ELECOMMUNICATION INFORMATION: TELEPHONE: 312-616-5400
                                                                                                                                                                                                                                                                                                                          OF.
                                                                                                                                                                                                                                                                                                                         Carney, K
                                                                                                                                                                                                                                                                                                                           McMaster, J. ...
Tricoli, David M
Reynolds, John I
Reyney, Kim J
                                                                                                                                                                                                                                                                                                              Cucumber
                                                                                                                                                                                                                                                                                                                                                                            Maury L
J. Russe
                                                                                                                                                                                                                                                                                                                          Plants
                                                                                                                                                                                                                                                                                                                                                 David M
John F
                                                                                                                                                                                                                                                                       Milnamow
                                                                                                                                                                                                                                                                                                                                                                            Russell
                                                                                                    US/10/011,033
US20020124286A1
                                                                                                                                                                                                                                                                                                              Resistant
er Mosaic V
                                                                                                                                                                                                                                                                       R
                                                                                                                                                                                                                                                            180 N.
                                                                                                                                                                                                                                                on N. Stetson,
                                                                                                                                                                                                                                                                                                              t to C
Virus
                                                                                                                                         Version
                                                                                                                                                                                                                                                                                                                           Strains
                                                                                                                                           #1.
                                                                                                                                            30
                                                                                                                                                                                                                                                            Suite
                                                                                                                                                                                                                                                                                                                          Of.
                                                                                                                                                                                                                                                             4700
```

فالعوالي ال

```
RESULT 2
US-10-011-033-4
; Sequence 4, Appl
; Publication No.;
GENERAL INFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SD
멍
                                                                          COUNTRY: U.S...

COUNTRY: U.S...

ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version

CURRENT APPLICATION NUMBER: US/10/011,033

FILING DATE: 13-No. US20020124286A1-200

CLASSIFICATION CUNKNOWN>

PRIOR APPLICATION NUMBER: US/08/875,233

FILING DATE: 26-JUN-1997

ATTORNEY/AGENT INFORMATION:

NAME: Lisa V. Mueller

TELEPHONE: 312-616-5400

TELEPAX: 312-616-5400

TELEPAX: 312-616-5460

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 218 amino acids

TYPE: SEQ ID NO: 4:
                                            Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Ma
Best Loc
Matches
                                                                                            -10-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0-011-033-2
                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                    Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                           Simila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :h 100.0%;
Similarity 100.0%;
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Rockey,
STREET: 2 Prudenti
CITY: Chicago
STATE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKS
MDKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10011033 No. US20020124286A1
                MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ဝှု
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
Carney, Plants Resis
                                             larity 1
Conservati
ESTSAGRNER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                        Rockey, Mi
Prudential
                                            100.0%;
100.0%;
cive (
                      14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plants Resistant
Cucumber Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lcids
                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                           Score 14; DB 13
Pred. No. 2.2e-C
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                       lnamow
Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 14; DE
Pred. No. 2.2
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                        & Katz,
180 N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.2e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
                                                                                                                                                                                                                                                                                                                                Version
                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
06;
-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ltd.
Stetson,
                                             0;
96;
96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                   Length
                                                                                                                                                                                                                                                                                                                                 #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ins
                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                         Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                    218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            218
                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                              0;
```

```
JUMBE.

STREET: 2 P1.

STREET: 2 P1.

STREET: 2 P1.

STREET: 2 P1.

CITY: Chicago

STATE: Illinois

COUNTRY: U.S.A.

ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER READABLE FORM:

MEDIUM TYPE: Ploppy disk

COMPUTER: 1BM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.3

RPLICATION DATA:

APPLICATION UNMBER: US/10/011,033

FILING DATE: 13-NO. US20020124286A1-2001

CLASSIFICATION UNMBER: US/00/875,233

FILING DATE: 26-UN-1997

ATTORNEY/AGENT INFORMATION:

TELEPHONE: J12-616-5400

TELEPAX: 312-616-5400

TELEPAX: 312-616-5460

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

LENGTH: 218 amino acids

TYPE: amino acid

TOPICAT': linear

'TYPE: protein

"SCOTE 14; DB "TYPE: DISTION: SEQ ID NO: 6:

"matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
US-10-011-0
; Sequence
; Publicati
                                                                                                                                                                                                                                                                                                                                                                                            ; MC
; SE
US-10-011-0
                                                                                                                                                                                                                    RESULT 4
US-10-011-(
                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                         Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL
APP
                                                                                                                                                                             GENERA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .-033-6
se 6, Application US/10011033
ation No. US20020124286A1
RAL INFORMATION:
APPLICANT: Boeshore, Maury L
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow
STREET: 2 Prudential Plaza,
CITY: Chicago
                                                                                        Н
                                                                                                                                                              APPLICANT:
                                                                                                                                                                   033-15
15, Application US/10011033
ion No. US20020124286A1
L INFORMATION:
                                                                                        ITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ITLE OF
                                                                                                                                                                                                                                                                              MDKSESTSAGRNRR 14
                                                                                          ဝ္ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
FINVENTION: Plants Resistant t
                                                                   NT: Boeshore, Maury L
McMaster, J. Russell
Tricoli, David M
Reynolds, John F
Carney, Kim J
F INVENTION: Plants Resistant t
Cucumber Mosaic Vi
                  & Katz,
180 N.
                                                                          t to C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Ltd.
Stetson,
                 , Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strains
                                                                                        Strains
                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #1.30
                   Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Suite
                                                                                          Of.
                                                                                                                                                                                                                                                                                                                                                                   218;
                   4700
                                                                                                                                                                                                                                                                                                                                        <u></u>
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                        0
```

```
RESULT 5
US-10-011-033-10
; Sequence 10, Application U
; Publication No. US20020124
; Publication No. US20020124
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-011-033-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acide
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION NUMBER: US/08/875,233
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRI.

ZIP: 60089

ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Mil
STREET: 2 Prudential P
CITY: Chicago
STATE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release CURRENT APPLICATION DATA:
                                                                                                                                                                                                        ZIP: 60089
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 100.0%;
Similarity 100.0%;
L4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
TOPOLOGY: linear
CULE TYPE: protein
ENCE DESCRIPTION: SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: I1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 13-No. CLASSIFICATION: <Ur. APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/10/011,033
FILING DATE: 13-No. US20020124286A1-2001
                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                          ဝှု
                                                                                                                                                                                                                                                                                                                                                      Carney, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                          lication US/10011033
US20020124286A1
                                                                                                                                                                                                                                                                                                                                                                Boeshore, Maury I
McMaster, J. Russ
Tricoli, David M
Reynolds, John F
Carney, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Illinois
                                                                                                                                                                                                                                    U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                        Plants
                                                                                                                                                                                                                                                                                                                                          Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             compatible
PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                           Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
                                                                                                                                                                                                                                                                              Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                                                                                       Resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          red. No. 2.2
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO:
                                                                                                                                                                                                                                                                                                                                         Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #1.
                                                                                                                                                                                                                                                                                & Katz, 180 N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                          Virus
                                                                                                                                                                                                                                                                                                                                                         ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13;
.2e-06;
0;
                                                                                                                                                  Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version
                                                                                                                                                                                                                                                                                , Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                        Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                世1.
                                                                                                                                                  #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                 Suite
                                                                                                                                                                                                                                                                                                                                                         of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      218
                                                                                                                                                                                                                                                                                  4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
RBSULT 6
US-10-424-59
                                                                                                                                                                                  RESULT 7
US-10-425-1
; Sequence
; Publicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭥
                                                                                                                                                                                                                                                  정
                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                       US-10-424-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-011-0
                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF
SEQ ID NO 2
LENGTH: 3
                                                                                                                                                                                                                                                                                          Query Match
Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence :
Publication
                                                                                                                                                                        GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Matcl
Best Local
                                 SEQ
                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REF
CURRENT
CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
TITLE OF IN
TITLE OF IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                CURRENT I
                                                                          TITLE OF
TITLE OF
FILE REF
                                                                CURRENT
 TYPE: PRT ORGANISM:
                                                                                                                                                                                                                                                                                                                                                OTHER
            PPLICANT: Liu, Jingdong

PPLICANT: Sovalic, David K.

PPLICANT: Screen, Steven E

PPLICANT: Tabaska, Jack E

PPLICANT: Cao, Yongwei

TILE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

LE REFERENCE: 38-21(53313) B

RRENT APPLICATION NUMBER: US/10/425,114

URENT FILING DATE: 2003-04-28

1D NO 51049

NGTH: 183

PE: 73128
                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Glycine
                                                                                                                                                                                                                                                                                                                                                          FEATURE
                                                                                                                                                                                                                                                                                                                                                                                  TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMA
                     LENGTH
                                                                                                                                                                                                                                                                                                                                                                                       OF INVENTION: Soy Nucleic Acid M DEFERENCE: 38-21 (53223) B T APPLICATION NUMBER: US/10/424,! T FILING DATE: 2003-04-28 OF SEQ ID NOS: 285684 NO 283746
H: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
MATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΞS
                                                                                                                                                                                                                                                                                                                                                                                   PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 218 amino a
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SE
-033-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T: La Rosa Thomas J
T: Kovalic David K
T: Zhou Yihua
T: Cao Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99-283746
283746, Application US
on No. US20040031072A1
NFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ch
                                                                                                                                                                                                                                                  18
                                                                                                                                                                                                                                                                                                                                       99-
                                                                                                                                                                                                                                                                                                                  Ch
                                                                                                                                                                                                                                                                                                                                                 NFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             h 85.7%;
Similarity 100.0%;
12; Conservative
                                                                                                                                                                                                                                                                                          Similarity 100.0%;
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDKSESTSAGRN 12
Zea
                                                                                                                                                                                                                                                  KSESTSA 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDKSESTSAGRN
                                                                                                                                                                                                                                                                       KSESTSA
                                                                                                                                                                                                                                                                                                                                       283746
mays
                                                                                                                                                                                                                                                                                                                                                                       max
                                                                                                                                                                                                                                                                        φ
                                                                                                                                                                                                                                                                                                                                                  Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                  IJ:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/10424599
                                                                                                                                                                                                                                                                                                                                                                                                                                       US/10/424,599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acids
                                                                                                                                                                                                                                                                                                                                                PAT_MRT3847_98246C.1.pep
                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                      Score 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UI
                                                                                                                                                                                                                                                                                           ed. No. 4.9;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Molecules and Othe Thereof for Plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10:
                                                                                                                                                                                                                                                                                                                  BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 13;
0.00022;
0;
                                                                                                                                                                                                                                                                                                                 15;
                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Other Molecules lant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                   35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218;
                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                             o
;-
```

With

The state of the s

```
RESULT 9
US-10-425-115
; Sequence 32336b,
; Publication No. USzc;
GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas capplicant: Zhou, Yihua
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; TITLE OF INVENTION: Nucleic Acid Marite OF INVENTION: Plants
; FILE REFERENCE: 38-21(53222)B
; CURRENT APPLICATION NUMBER: US/10
; CURRENT FILING DATE: 2003-04-28
    "MMBER OF SEQ ID NOS: 369326
    "Ays

"Ays

"Ays

"Ays

"THE OF INVENTION TO NUMBER: US/10
    "THE OF SEQ ID NOS: 369326
    "THE OF SEQ ID NOS: 369326
    "THE OF SEQ ID NOS: 369326
    "Ays

"Ays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
US-10-425-1
; Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: US-10-425-114-53499
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules
TITLE OF INVENTION: Plants and Uses Thereo
FILE REFERENCE: 38-21 (53313) B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 53499
LENGTH: 343
Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence 53499, Application US/10425114 Publication No. US20040034888A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
OTHER INFOR
-10-425-114-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      : Edal
                                                                                                                                                                                                                                          425-115-323368
ence 323368, Application US/10425115
                     Local
                                                                                                                                                                                                                                                                                                                                                                            Local
                              Match
                                                                                                                                                                                                                                                                                                                                                                                     Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
50.0%;
Similarity 100.0%;
7; Conservative
                                                                                                                                                                                                                                                                                                                                          u
                                                                                                                                                                                                                                                                                                                                                                Similarity 100 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 7; Conser
                                                                                                                                                                                                                                                                                                                                     KSESTSA
                                                                                                                                                                                                                                                                                                                                                                                                                                           Glycine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Liu, Jingdong
                                                                                                                                                                                                                                                                                                                      KSESTSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhou, Yihua
Kovalic, David
Screen, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    53499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STSAGR
                                                                                                                                                                                                                                                                                                                                                                                                                                            max
                                                                                                                                                                                                                                                                                                                                            φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rvat
                                                                                                                                                                                                                                                                                                                                                                                                                     Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clone
                                                                                                                                                                                                                                                                                                                                                                         50.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50.0%;
100.0%;
cive (
                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                     ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ID:
                                                                                                                                                                                                                                                                                                                                                                         0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ᅜᄶ
                                                                                                                                          US/10/425,11
)4-28
         0
                                                                MRT4577
                                                                                                                                                                                                                                                                                                                                                                .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                     700836661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LIB143-062-F2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 7
      Score 7; DB 1
Pred. No. 34;
; Mismatches
                              Ŝ
                                                                                                                                                                                                                                                                                                                                                                          Pred.
                                                                                                                                                                                     Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Thereof fo
                                                                                                                                                                                                                                                                                                                                                                            7;
No
                                                              57983C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                    _FLI.pep
                                                                                                                                                                                                                                                                                                                                                                          DB 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _FLI
                                                                                                                                                                                                                                                                                                                                                                                    15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for
                                                                                                                                                                                     Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Other
         <u>,</u>
                                                                                                                                                                                                                                                                                                                                                              <u></u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ?
                              Length
                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plant
          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                     Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Improvement
                                375
                                                                                                                                                                                                                                                                                                                                                                                    343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               183
          ·.
                                                                                                                                                                                                                                                                                                                                                                0
••
                                                                                                                                                                                    Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Associated
                                                                                                                                                                                                                                                                                                                                                              Gaps
          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                     With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           With
          .
0
                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
RESULT
US-10-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-424-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                APPLICANT: La Rosa Thomas J
APPLICANT: Kovalic David K
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Acid Molecul
TITLE OF INVENTION: Plants and Uses Thereof
FILE REFERENCE: 38-21(53223)B
CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 285684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 169865, Application US/10437963; Publication No. US20040123343A1; GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Boukharov, Andrey A.
APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
Matches
                                    Query Mate
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF
TITLE OF
FILE REFE
CURRENT A
CURRENT F
NUMBER OF
SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Publicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Publicati
                                                                                                                                                                                                                                                                                             SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: unsure
LOCATION: (1) . (4:
OTHER INFORMATION
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT ORGANISM:
                                                                                                                                                                                                   LENGTH: 469
TYPE: PRT
ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                            FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          599-236497
236497, Application US/10424599
ion No. US20040031072A1
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F INVENTION: Rice Nucleic Acid Molecules and Other Molecules F INVENTION: Plants and Uses Thereof for Plant Improvement FERENCE: 38-21(53221)B
APPLICATION NUMBER: US/10/437,963
FILING DATE: 2003-05-14
OF SEQ ID NOS: 204966
Colored Province Plant Improvement Plant 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION: Clone ID: 963-169865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ON: (1)..(448)
INFORMATION: u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                276
                                                               Ch
                                                                                                                        NFORMATION: 99-236497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63-169865
                                                                                                                                                                                                                                                               236497
469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ហ
50.0%;
Similarity 100.0%;
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  similarity 100.0%;
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ESTSAGR 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ESTSAGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                                                                  Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unsure at
                                                                                                                                                   ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              all
                                                                                                                                                 PAT_MRT3847_55584C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 7; DB 16; Pred. No. 40; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT_MRT4530_68245C.1.pep
     Score 7; DB 15
Pred. No. 41;
0; Mismatches
           .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                Molecules and Other Molecules
Thereof for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             locations
                                                                 DB 15;
        <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                 Length 469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 448;
              Indels
           .
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Сарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Associated With
           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

ફ

w

KSESTSA

φ

```
WESULT 12
US-10-203-915A-131
; Sequence 131, Application US/10zuzzzz;
; Publication No. US20040106159A1
; GENERAL INFORMATION:
; APPLICANT: Kern, Florian
; TITLE OF INVENTION: Method for Antigen-Specific Stititle OF INVENTION: Lymphocytes with synthetic Perfile Reference: 010266wo/JH/ml
; CURRENT APPLICATION NUMBER: US/10/203,915A
; CURRENT FILING DATE: 2002-08-15
; NUMBER OF SEQ ID NOS: 260
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 131
**FNGTH: 15
RESULT 14
US-10-203-915A-133
; Sequence 133, Application US/1020
; Publication No. US20040106159A1
; GENERAL INFORMATION:
; APPLICANT: Kern, Florian
                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
US-10-203-915A-132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 6
                                                                                                                                                    Query Ma
Best Loo
Matches
                                                                                                                                                                                                                                                                                                                                                                                             Sequence 132, Applic Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                       SEQ
                                                                                                                                                                                                                                                                                              APPLICANT: Kern, Florian
TITLE OF INVENTION: Method for Antigen-Specific
TITLE OF INVENTION: Lymphocytes with synthetic
FILE REFERENCE: 010266wo/JH/ml
CURRENT APPLICATION NUMBER: US/10/203,915A
CURRENT FILING DATE: 2002-08-15
NUMBER OF SEQ ID NOS: 260
SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                               ORGANISM: Artificial FEATURE:
OTHER INFORMATION: DeloTHER INFORMATION: Frances
                                                                                                                                                                                                     10-203-915A-132
                                                                                                                                                                                                                                                                         EQ ID NO 132
LENGTH: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION:
OTHER INFORMATION:
.0-203-915A-131
                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                Y Match
                                                                                                                                                                                                                                                                                                                                                                                                    132,
'n No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                  42.9%;
Similarity 100.0%;
6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STSAGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KSESTSA
                                                                                                       STSAGR
                                                                                                                              STSAGR 11
                                                                                                                                                                                                                                                                                                                                                                                                             Application US/10203915A
5. US20040106159A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42.9%;
:y 100.0%;
ervative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34
                                                                                                                                                                                                              Description Fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description Fragment
                                                                                                                                                                                                                                                   Sequence
                                             US/10203915A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                     0
                                                                                                                                                                Score (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                                                                                                                                                                                                                            of
                                                                                                                                                  ore 6; DB 1 red. No. 24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                             Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1
                                                                                                                                                                24;
                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                              Stimulati
Peptide I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stimulation of T
Peptide Libraries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                     0;
                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                            Libraries
                                                                                                                                                                                                                             HCMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HCMV
                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                         of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pp65
                                                                                                                                                                                                                           pp65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                     Gaps
                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
RESULT 15
US-10-424-5
Search
Job tim
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                               -Sn
                                        멍
                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                      Query Mata
Best Local
Matches
                                                                             Query Match
Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
                                                                                                                                                                                                                                                                                           Publicati
GENERAL 1
                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                              CURRENT I
                                                                                                                                                                                                             TITLE OF
TITLE OF
FILE REF
CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Method for Antigen-Specific TITLE OF INVENTION: Lymphocytes with synthetic FILE REFERENCE: 010266wo/JH/ml CURRENT APPLICATION NUMBER: US/10/203,915A CURRENT FILING DATE: 2002-08-15 NUMBER OF SEQ ID NOS: 260
                                                                                                                                                                                                                                                  APPLICANT: La Rosa Thomas
APPLICANT: Kovalic David
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
                                                                                                                      10-
                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER
OTHER
10-203-
                                                                                                                                                  TYPE: PRT ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
TYPE: PI
ORGANISI
FEATURE
 time
                                                                                                                              OTHER
                                                                                                                                          FEATURE
                                                                                                                                                                      LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                             y Match
Local &
                                                                                                   Match
                                                                                                                                                                                        OF INVENTION: Soy Nucleic Ac
OF INVENTION: Plants and US
REFERENCE: 38-21 (53223) B
NT APPLICATION NUMBER: US/10/
NT FILING DATE: 2003-04-28
R OF SEQ ID NOS: 285684
                                                                                                                                                                                                                                           OF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H: 15
PRT
pleted:
                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION: INFORMATION: 915A-133
                                                                                                                                                                                                                                                                                          599-145411
145411, Application US
ion No. US20040031072A1
INFORMATION:
                                                                                                                     INFORMATION:
599-145411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X
                                                                                                                                                                      145411
54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                            42.9%;
Similarity 100.0%;
6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   42.9%;
Similarity 100.0%;
6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PatentIn Ver.
                                        MDKSES
 весв
                                                                                                                                                  Glycine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Artificial
                                                                                                                                                                                                                                                                                                                                                                STSAGR
                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                          MDKSES
                                                                                                                                                                                                                                                                                                                                                                               TSAGR
          December
                                        σ
                                                                                                                                                                                                                                                                                                                                                                 7
                                                                                                                                                                                                                                                                                                                                                                                    11
                                                           σ
                                                                                                                                                    max
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description of Artificial Sequence: HCMV Fragment
                                                                                                                                Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequenc
          ហ
                                                                                                                                ID:
                                                                                                                                                                                                                                                                        ᄶᅜ
                                                                                                                                                                                                                                                                                                              US/10424599
                                                                                                                                                                                                             US/10/424,599
          2004,
                                                                                                                               PAT_MRT3847
                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                               .
                                                                              Score 6; DB 1
Pred. No. 70;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                Score 6;
Pred. No
                                                                                                                                                                                                                                 Acid
Uses
                                                                                                                                                                                                                                                                                                                                                                                                       ore 6; DB 10 red. No. 24; Mismatches
           0
           8:19:
                                                                                                                                                                                                                                 Molecules and Other Molecules Thereof for Plant Improvement
                                                                                   DB 1.
                                                                                                                               _102325C.1.pep
                                                                                                   15;
                                                                                                                                                                                                                                                                                                                                                                                                                          16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stimulation of T
Peptide Libraries
                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                               .
                                                                                                  Length 54;
                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pp65
                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                               0;
                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                            Associated
                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                               0;
                                                                                                                                                                                                                                             With
```

The second second

This Page Blank (uspto)

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                    Minimum
Maximum
                                                                                                                                                                                                                                                   Result
No
                                                                                                                                                                                                                                                                                                                                                                                          Total
                                                                                                                                                                                                                                                                                                                                                                                                          Word
                                                                                                                                                                                                                                                                                                                                                     Post.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ջ
                                                                                                                                                                                                                                                                                                                                      Databa
                                                                                                                                                                                                                                                                                                                                                                                                                         earche
                                                                                                                                                                                                                                                                                                                                                                                                                                               coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
  9
                                                                                                                                                                                                                                                                                                                                                                                                          size
                                                                                                                                                                                                                                                                                                                                                   processing:
                                                                                                                                                                                                                                                                                         Precent and
                                                                                                                                                                                                                                                                                                                                                                                          numbe
                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                         æ
                                                                                                                                                                                                                                                                                                                                      \mathbf{o}
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                               table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bcore
                                                                                                                                                                                                                                                                                                                                                                     ם ם
                                                                                                                                                                                                                                                                                         rec
                                                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                     шш
                                                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                                                                                                                                  seq
                                                                                                                                                                                                                                                                                                                                                                                           H
                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                            ar
Si
No
  greater t
derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                           Ŧ
                                                                                                                                                                                                                                                                                                                                                                  length:
length:
  OLIGO
Gapop
                                                                                                                                                                                                                                                  Que:
                                                                                                                                                                                                                                                                                                                                                                                          hi
                                                                                                                                                                                                                                                                                                                                                                                                                                                             US
14
                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           December
                                                                                                                                                                                                                                                                                                                      UniProt_02:4
1: uniprot_t
2: uniprot_t
                                                                                                                                                                                                                                                                                                                                                                                                                         8251
                                                                                                                                                                                                                                                                                                                                                    Listing
                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                              MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                          ct
                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                opyright
                                                                                                                                                                                                                                                                                                                                                                                          Œ
                                                                                                                                                                                                                                                                                        γď
                                                                                                                                                                                                                                                                                                                                                                                                                         .81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          search,
                                                                                                                                                                                                                                                                                                 han
                                                                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                        Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                                                                                                                                                                                                                                       number
                                                                                                                                                                                                                                                    ō
                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                          ~
                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ហ
                                                                                                                                                                                                                                                                                        n or equal
analysis c
                                                                                                                                                                                                                                                   ngth
                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                   000000000
                                                                                                                                                                                                                                                                                                                                                                                                                         Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7
  first
                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                        egs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5,
                                                                                                                                                                                                                                                                                                                                                                                          fyi
                                                                                                                                                                                                                                                                                                                     _trembl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2004,
                                                                                                                                                                                                                                                                                                                                                                                         bu
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapext
                                                                                                                                                                                                                                                                                                       0f
                                                                                                                                                                                                                                                                                                                                                                                                                         Ģ
   45
                                                                                                                                                                                                                                                                                                                                                                                          cho
                                                                                                                                                                                                                                                                                                                                                                                                                         ທັ
Q6T7D4
Q66133
Q8QTA0
AAR89478
COAT_CMVAS
COAT_CMVBA
COAT_CMVC7
COAT_CMVFT
COAT_CMVFT
COAT_CMVFT
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVN
COAT_CMVV
O89125
O90712
Q6Q4B0
Q6Q4B0
Q6G17E2
Q6GU1R4
Q6U1R5
Q6U1R5
Q6U1R19
                                                                                                                                                                                                                                                                                        results l to the of the t
                                                                                                                                                                                                                                                   ij
                                                                                                                                                                                                                                                                                                                                                                                                                         ù
                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₩8
                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                     ummarie
                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                       60.
                                                                                                                                                                                                                                                                                                                                                                                          en
                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05:52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          model
                                                                                                                                                                                                                                                                                                                                                                                                                         O)
                                                                                                                                                                                                                                                                                                                                                                                          pa
                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                        s predicted by
e score of the
total score di
                                                                                                                                                                                                                                                                                                                                                                                          rame
                                                                                                                                                                                                                                                                                                                                                                                                                         Φ
                                                                                                                                                                                                                                                                                                                                                                                                                         \omega
                                                                                                                                                                                                                                                                                                                                                                                                                         idue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Search time 92 (without alignment 87.557 Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                          Φ
                                                                                                                                                                                                                                                                                                                                                                                          BA
                                                                                                                                                                                                                                                                                       by chance the result k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ltd
                                                                                                                                                                                                                                                                                                                                                                                          1825181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ments)
Q6t7d4 cucumber most paragraphic cucumber mo
                                                                                                                                                                                                                                                                                        to have being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seconds
                                                                                                                                                                                                                                                  scription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            updates/sec
                                                                                                                                                                                                                                                                                                      have
                                                                                                                                                                                                                                                                                              ve a
printed,
                                                                                                                                                                                                                    mosa
```

S

ຜ

```
RESULT
AAR8947
ID AF
AC AF
DT 07
DT 07
DT 07
DT 07
CO 08
CO 08
CO 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SON DEAD DEAD DEAD DE CONTRA PER SON DE CONTRA P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RA DR 
                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8QTAO PRELIMINARY; PRT; 217
Q8QTAO;
Q11-JUN-2002 (TrEMBLrel. 21, Created)
Q1-JUN-2002 (TrEMBLrel. 21, Last sequenced)
Q1-JUN-2002 (TrEMBLrel. 25, Last annotated)
Q1-OCT-2003 (TrEMBLrel. 25, Last annotated)
Q1-OCT-2003 (TrEMBLrel. 25, Last annotated)
Q1-OCT-2003 (TrUBSEO);
Q1-DASSIFIED (TRUBSES)
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Revista Corpoica 1:1-5(1996).
[2]
SEQUENCE FROM N.A.

Marino-Ramirez L.;
Submitted (JUL-1995) to the EMBL/GenBank
EMBL; U32859; AAB50176.1; -.

PIR; JC6073; JC6073.

PIR; JC6075; JC6075.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0005198; F:structural molecule ac
InterPro; IPR000247; Cucumovirus coat.

InterPro; IPR008975; Viral_cap_coat.

Pfam; PF00760; Cucumo_coat; 1.

PRINTS; PR00222; CUCUMOCOAT.

ProDom; PD001284; Cucumovirus_coat; 1.

Coat protein.

SEQUENCE 217 AA; 24015 MW; 725187E67
                                AAR89478;
AAR89478;
02-MAR-2004
02-MAR-2004
02-MAR-2004
Coat protein
Cucumber mos
                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                      مسو
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ŝ
                                                                                                                                                                                                                                                                                                                                                     MDKS!
                                    mosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MDKS
                                                                                                                                                                                                                                                                                                                                                                                                            MDKSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    imil:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             imi
;
                                                              H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ilarity
Conserv
                                                                                        (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                             PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0
larity 100.0
Conservative
                                      C
L
                                                                                                                                                                                                                                                                                                                                                        四-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (I)-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - গো
                                                                                                                                                                                                                                                                                                                                                        Ø.
                                                                                                                                                                                                                                                                                                                                                                                                            വ -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STSAGRNRR
                                                                                                                                                                                                             ELIMINARY
                                                                                                                                                                                                                                                                                                                                                    STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rva
                                      Buz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.
100.
                                    (cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    اسو
                                                                                             NNN
                                                                                              777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0%;
                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            **
                                                                                        Created)
Last seq
Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 14; DB Pred. No. 3.6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               טֿ מ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 14; I
Pred. No. 3.
Mismatches
                                                                                                                                                                                                             Ř1
                                    Bom
                                                                                          sequence
annotatio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L.,
                                      aic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7E6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          217
                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xiaodong D., ssion Vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ű
                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ď
                                      cucumovirus)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2
3.6e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2
3.6e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7D3B3AE
                                                                                     e update)
ion update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        エマゴ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ivi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92DCAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
-07;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ty;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xueging
For the F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 Z.;
Banana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,</u>
                                  RESULT 6
COAT_CMVBA
ID COAT_C
AC Q66135
```

```
SQ PRI RAC OCC
B
                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                          RESULT 5
NOAT CMVAS
D COAT CMVAS
C Q66154;
T 15-DEC-1998
T 15-DEC-1998
Coat protein
Cucumber mosa
Viruses; ssRN
Cucumovirus.
NCBI TaxID=11
[1]
SEQUENCE FROM
Hyon S., Park
Submitted (FEB
                                         Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Mat
Best Loca
Matches
                                                                                  EMBL; X7
PIR; S42
InterPro
InterPro
Pfam; PF
PRINTS;
ProDom;
Coat pro
SEQUENCE
                                                                                                                                                                                              the Eu
use b
modifi
entiti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Viruse
Cucumc
NCBI 1
[1]
SEQUEN
SEQUEN
STRAIN
Yan L.
"Compl
RNA3."
Submit
EMBL;
Coat F
                                                                                                                                                                                                                                                                This
                                                     Match
Local (
                                                                                                 L; X77855; CAA54846.1; -.
; S42098; S42098.
erPro; IPR000247; Cucumovirus_coat.
erPro; IPR008975; Viral_cap_coat.
m; PF00760; Cucumo_coat; 1.
NTS; PR00222; CUCUMOCOAT.
Dom; PD001284; Cucumovirus_coat; 1.
                                                                                                                                                                                                                                                                                      _ H 00 F-
                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation - uropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way ied and this statement is not removed. Usage by and for commercial ies requires a license agreement (See http://www.isb-sib.ch/announce/nd an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                          NCE FROM N.A.
S., Park Y.I.;
tted (FEB-1994) to the EMBL/GenBank/DDBJ databases.
IMILARITY: Belongs to the cucumoviruses/bromoviruses coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tted (OCT-2003) to the AY429437; AAR89478.1; protein.
                                                                                                 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCE
                                                                                                                                                                                                                                                                                                                                                        raxID=117118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TaxID=12305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Xu Z., Goldbach R., Chen ete nucleotide sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    s; ssRNA positive-strand viruses,
                                         h 100.0%;
Similarity 100.0%;
14; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
Similarity 100.0%;
L4; Conservative C
                                                                                                                                                                                                                                                                                                                                                                         998 (Rel. 37, Created)
998 (Rel. 37, Last sequence update)
998 (Rel. 37, Last annotation update)
998 (Capsid protein) (CP).
mosaic virus (strain As) (CMV).
ssRNA positive-strand viruses, no DN
                     MDKSESTSAGRNRR 14
MDKSESTSAGRNRR
                                                                                     218 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    217 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24015 MW;
                                                                                     24044 MW;
                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                          Score 14; DB 1;
Pred. No. 3.7e-07;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 14; DB 2;
Pred. No. 3.6e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                            coat; 1.
                                                                                       E6BEC2E3D4CD73EF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32D0035B4F20E891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                     coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        K., Prins M.;
cucumber mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                         218 AA.
                                                                                                                                                                                                                                                                                                                                                                           no DNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                               Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virus
                                                                                                                                                                                                                                                                                                                                                                              Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           isolate)
                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                           0
```

CMVBA

STANDARD;

218

```
L-J-DEC-1998 (Rel. 37, Created)
L-J-DEC-1998 (Rel. 37, Last sequence update)
DE Coat protein (Capsid protein) (CP).
Cucumber mosaic virus (strain C7-2) (CMV).
OC Viruses; ssRNA positive-strand viruses, no Cucumovirus.
NCBI_TaxID=117117;
[1]
P SEQUENCE FROM N.A.
Chaumpluk P., s-
Suzuki K
Query Match
Best Local &
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U43888; AAA87044.1; -.
InterPro; IPR000247; Cucumovirus_c
InterPro; IPR008975; Viral_cap_coa
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat
Coat protein.
SEQUENCE 218 AA; 24174 MW; 9EB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cucumovirus.

NCBI_TaxID=117120;
[1]

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

Gafny R., Wexler A., Mawa
"Natural infection of bar
cucumber mosaic virus.";

Phytoparasitica 24:49-56;

-!- SIMILARITY: Belongs t
family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a chetween the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and frentities requires a license agreement (See http://www.isb-sibor send an email to license@isb-sib.ch).
                                                                                       SEQUENCE FROM N.A.
Chaumpluk P., Sasaki Y., Nakajima N., Nagano H., Nal
Suzuki K., Mise K., Inouye N., Okuno T., Furusawa I
"Six new subgroup I members of Japanese cucumber mon
determined by nucleotide sequence analysis on RNA3',
Ann. Phytopathol. Soc. Jpn. 62:40-44(1996).
-I- SIMILARITY: Belongs to the cucumoviruses/bromov.
family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence upd
15-DEC-1998 (Rel. 37, Last annotation u
Coat protein (Capsid protein) (CP).
Cucumber mosaic virus (strain Banana) (
Viruses; ssRNA positive-strand viruses,
This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                             .
14
                                                                                                                                                                                                                                                                                                                                                        \vdash
                                                                                                                                                                                                                                                                                                                                     MDKSES
                                                                                                                                                                                                                                                                                                                                                                                       imi
                                                                                                                                                                                                                                                                                                                                                                             ilarity 1
Conservati
                                                                                                                                                                                                                                                                                                                                       STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                  STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mawassi
f banana
s.";
                                                                                                                                                                                                                                                                                                                                                                             100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0. --
                                                                                                                                                                                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              t 0
                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                         ቝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                      ** **
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               he
                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ,
У ў
                                                                                                                                                                                                                                                                                                                                                                             ~.
                                                                                                                                                                                                                                                                                                                                                                             Score 14
Pred. No
Mismat
                                                                                                                                                                                                                                                                                                                                                                                                                                           coat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         is_coat
_coat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cucumoviruse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ø
                                                                                                                                                                                                                                                                                                                                                                                                                        EB4FC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Israeli
matelli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e update)
ion update)
                                                                                                                                                                                                                                                                                                                                                                                      14;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                       B212A21223
                                                                                                                                                                                                                                                                                                                                                                              che
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CMV)
                                                                                                                                                                                                                                                                                                                                                                                       ω
·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           no
                                                                                                                                                                                                                                                                                                                                                                                        DB
.7e
                                                                                                                                                                                                                                                                                                                                                                               Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TK
                                                                                                    es/bromovi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O •
                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 5
                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bar-Joseph containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /bromovi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stage;
                                                                                                                                                                                                          stage;
                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64
                                                                                                                                             Nakamura
a I.;
                   /www.isb-sib.ch/
                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                  saic
                                                                                                                         Ø
                                                                                                     ruse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ruse
                 restrictions on it tent is in no way and for common is in the common way.
                                                                                                                        cDNAs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bromoviridae;
                                                                                                                                                                                                           Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                  218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                         virus
NAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nt is i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ਨਿਤ
                                                                                                     Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nd for commercial -sib.ch/announce/
                                                                                                     coat
                                                                                                                                                        Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coa
                                                                                                                                                                                                                                                                                                                                                                              O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    coll
                                                                      collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               c
                                                                                                                                   as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                    protei
                           in no way commercial
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     laborat:
                   announc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 way
                                                 its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ion
                                                                                                                                                                                                                                                                                                                                                                             0;
                   Ø
```

```
RESUI
COAT
ID
AC
AC
DT
DT
                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
COAT_C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DR                                                                                                 몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                         Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Mat
Best Loca
Matches
SULT 9
AT_CMVFC
COAT_C
Q00259
01-DEC
01-DEC
                                                                                                                                                                                 EMBL; D28489; BAA05851.1; -.
InterPro; IPR000247; Cucumovirus_coat.
InterPro; IPR008975; Viral_cap_coat.
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat; 1.
Coat protein.
SEQUENCE 218 AA; 24157 MW; 76F6BDCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CMVCS
COAT
Q66143
15-DEC
15-DEC
Coat F
Cucumb
                                                                                                                                                                                                                                                                                                                                                                                Cucumo
NCBI_1
[1]
SEQUEN
Chaumg
Suzuki
"Six r
detern
Ann. I
                                                                                                                                                                                                                                                                                           use | modif:
entit:
                                                                                                                                                                                                                                                                                 or
                                                                                                                                                                                                                                                                                                                          This betweether 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Interi
Interi
Interi
Pfam;
PRINTS
ProDon
Coat I
SEQUEN
                                                                                                                                                                                                                                                                                 ū
                                                                                                                                                             Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ma
                                                                                                                                                                                                                                                                                                                                                 Ò
                                                                                                                                                                                                                                                                                                                             ø
                                                                                                                                                                                                                                                                                                                                                                       Hi (2)
                                                                                                                                                   Ō
                                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                              SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation - Suropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way ied and this statement is not removed. Usage by and for commercial ies requires a license agreement (See http://www.isb-sib.ch/announce/and an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                              NCE FROM N.A.

Apluk P., Sasaki Y., Nakajima N., Nagano H., Nakamura I.,

Ki K., Mise K., Inouye N., Okuno T., Furusawa I.;

new subgroup I members of Japanese cucumber mosaic virus a

mined by nucleotide sequence analysis on RNA3's cDNAs.";

Phytopathol. Soc. Jpn. 62:40-44(1996).

SIMILARITY: Belongs to the cucumoviruses/bromoviruses coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C-1998 (Rel. 37, Created)
C-1998 (Rel. 37, Last sequence update)
C-1998 (Rel. 37, Last annotation update)
protein (Capsid protein) (CP).
ber mosaic virus (strain CS) (CMV).
les; ssRNA positive-strand viruses, no DN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D42079; BAA07675.1; -.
Pro; IPR000247; Cucumovirus coar
Pro; IPR008975; Viral cap coat
PF00760; Cucumo coat; 1.
S; PR00222; CUCUMOCOAT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          m; PD001284; Cucumovirus_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ovirus.
TaxID=117109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tch
                                           CMVFC
                                                                                                                                                                                                                                                                                                                                                                       amily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CMVCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein.
                                                                                                                                         14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
Similarity 100.0%;
[4; Conservative 0;
                                                                                              MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218 AA;
                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24033 MW;
                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 14; I
Pred. No. 3.
); Mismatcher
                                                                                                                                      Score 14; DB Pred. No. 3.7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  coat;
                                                                                                                                                                                    76F6BDCD9628F683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16D96022D1A26FD8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           coat
                                                                                                                                                                                                         1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14; DB 1;
No. 3.7e-07;
                                           218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     218
                                                                                                                                     DB 1; _
3.7e-07;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          no DNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC6
                                                                                                                                                                                   CRC64;
                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bromoviridae;
                                                                                                                                                              218;
                                                                                                                                          <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                 35
                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gap
                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

9; IC-1992 IC-1992 IC-1998

(Rel. (Rel.

24, 24, 37,

Created) Last sequence that the control of the cont

sequence update)
annotation update)

```
Ş
                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                            Que:
Besi
Mat
                                                                                                                         COAT CMVFT STANDARD; PRT; 218 AA.

Q66140;
Q66140;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Coat protein (Capsid protein) (CP).
Cucumber mosaic virus (strain FT) (CMV).
Viruses; ssRNA positive-strand viruses, no DNA stage; Br.
Cucumovirus.
NCBI TaxID=117112;
[1]
SEQUENCE FROM N.A.
Chaumpluk P., Sasaki Y., Nakajima N., Nagano H., Nakamur.
Suzuki K., Mise K., Inouye N., Okuno T., Furusawa I.;
"Six new subgroup I members of Japanese cucumber mosaic determined by nucleotide sequence analysis on RNA3's cDN.
Ann. Phytopathol. Soc. Jpn. 62:40-44(1996).
-I- SIMILARITY: Belongs to the cucumoviruses/bromoviruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Coat protein (Capsid protein) (CP). Cucumber mosaic virus (strain FC) (Viruses; ssRNA positive-strand virus (Cucumovirus.)

NCBI_TaxID=31717;
[1]

SEQUENCE FROM N.A.

MEDLINE=92013983; PubMed=1919534; Shintaku M.; "Coat protein gene sequences of two reveal a single amino acid change coinduction."; J. Gen. Virol. 72:2587-2589(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; D10544; BAA01403
PIR; JQ1253; JQ1253.
InterPro; IPR000247; C
InterPro; IPR008975; V
Pfam; PF00760; Cucumo
PRINTS; PR00222; CUCUM
ProDom; PD001284; Cucu
Coat protein.
SEQUENCE 218 AA; 24
                                      This SWISS-PROT entry is copyright. It is produced between the Swiss Institute of Bioinformatics and the European Bioinformatics Institute. There are nuse by non-profit institutions as long as its modified and this statement is not removed. Usage entities requires a license agreement (See http://vor send an email to license@isb-sib.ch).
             EMBL;
Inter
                                                                                                                                                                                                                                                                                                  CMVFT
                                                                                                                                                                                                                                                                                                                                                                            ches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is product between the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There are use by non-profit institutions as long as its modified and this statement is not removed. Usas entities requires a license agreement (See http://or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 0
                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                               Mat
                                                                                                                                                                                                                                                                                                            0
                                                                                                                    th (C)
                                                                                                                  amily.
               שי
                      Ū
                                                                                                                                                                                                                                                                                                                                                                                                Ch
                                                                                                                                                                                                                                                                                                                                                                             14
24
              0
                     284
                                                                                                                                                                                                                                                                                                                                                         \vdash
                                                                                                                                                                                                                                                                                                                                        MDKS
                                                                                                                                                                                                                                                                                                                                                      MDKS
                                                                                                                                                                                                                                                                                                                                                                                     imi
               нφ
               P 7
            7; BAA
                                                                                                                                                                                                                                                                                                                                                                            lari
                                                                                                                                                                                                                                                                                                                                         13—13
                                                                                                                                                                                                                                                                                                                                       STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                            00247; Cucumovirus
08975; Viral_cap_co
Cucumo_coat; 1.
                                                                                                                                                                                                                                                                                                                                                                            .ty
              .05
47
                                                                                                                                                                                                                                                                                                                                                                            rvat
                                                                                                                                                                                                                                                                                                                                                                                                                                     Cucumovirus
             847.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           403.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      license agreement (
license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                   2413
                                                                                                                                                                                                                                                                                                                                                                            100
100
ive
                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                      . 0
                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                   <u>`</u>₹
                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CP).
FC) (CMV).
d viruses,
                                                                                                                                                                                                                                                                                                                                                                            Score 14;
Pred. No.
; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                             rus_coat.
                                                                                                                                                                                                                                                                                                                                                                                                                                   coat;
                                                                                                                                                                                                                                                                                                                                                                                                                  C4
              0
                                                                                                                                                                                                                                                                                                                                                                                                                   Ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        wo cucumber m
                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                                                                   FB1
                                                                                                                                                                                                                                                                                                                                                                            che
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                     Ü
                                                                                                                                                                                                                                                                                                                                                                                                                  F2A7CAB
                                                                                                                                                                                                                                                                                                                                                                                    DB 1
                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mosaic
g with c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Usage
                                                                 are no resu
                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         are
its
                                                                                                                                                                                                                                                                                                                                                                                    17;
                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stage;
                                                                                      and
                                                                                                                                                                                                                                                                                                                                                                                                                   CRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ed through a cand the EMBL
                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                Nakamura
a I.;
                                                  /www.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     no restrictions on i content is in no we by and for commerci/www.isb-sib.ch/announc
                                                                                                                                                                                                                                                                                                                                                                            Indel
                                                                                       through a d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chloros:
                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                            λq
                                                                                                                             ruses
                                                                                                                                                       þ.
                                                                                                                                               O
                                                  / and
                                                                             restr:
                                                                                                                                               DNAS
                                                                                                                                                                                                                        Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bromoviridae
                                                                                                                                                                                                                                                                                                                                                                             Ġ
                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                              virus
NAs.";
                                                                                                                                                                                                                                                                                                                                                                                                œ
                                                Y.C. The hor Lie
                                                                                                                             coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ت</u> ه
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 4
                                                                              ctions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ra
                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                      collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          collaboration -
                                                                                                                                                        ស
                                                                    'n
                                                                                                                            prot
                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in no way commercial
                                                            commerc
                                                                                                                                                                                                                                                                                                                                                                             Q
                                                   announc
                                                                                                                                                                                                                                                                                                                                                                             qp
                                                                      9
                                                                                                                                                                                                                                                                                                                                                                              Ö
                                                            way
cial
                                                                               its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ite
                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ø
```

```
RESULT 11
COAT_CMVI1
COAT_CMVI1
COAT_CMVI1
STANDARD; PRT; 218
AC p14767;
DT 01-APR-1990 (Rel. 14, Created)
DT 01-APR-1990 (Rel. 14, Last sequence updat
DT 15-DEC-1998 (Rel. 37, Last annotation upd
Coat protein (Capsid protein) (CP).
CC Cucumber mosaic virus (strain II7F) (CMV)
CC Cucumovirus.
CC Cucumovirus.
CX NCBI_TaxID=12308, 12307;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=I17F;
RX MEDLINE=90098885; PubMed=2602158;
RA Noel M.J.T., Ben Tahar S.;
RI Nucleotide sequence of the coat protein
RT cucumber mosaic virus (CMV) strain I17F."
RL Nucleic Acids Res. 17:10492-10492(1989).
RP ERRATUM.
RX MEDLINE=90206832; PubMed=2320436;
RA Noel M.J.T., Ben Tahar S.;
RL Nucleic Acids Res. 18:1332-1332(1990).
RP SEQUENCE FROM N.A.
RC STRAIN=FNY;
RX MEDLINE=91037954; PubMed=2230731;
RA Owen J., Shintaku M., Aeschleman P., Taha
                            SQ DR DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Ma
Best Loc
Matches
 Que
                        EMBL; X16386; CAA34422.1; -.
EMBL; D10538; BAA01397.1; -.
PIR; S09663; S09663.
InterPro; IPR000247; Cucumovis
InterPro; IPR008975; Viral_cag
Pfam; PF00760; Cucumo_coat; 1
PRINTS; PR00222; CUCUMOCOAT.
PRODom; PD001284; Cucumovirus
Coat protein.
SEQUENCE 218 AA; 24140 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR008975; Viral_cap_Pfam; PF00760; Cucumo_coat; 1. PRINTS; PR00222; CUCUMOCOAT. ProDom; PD001284; Cucumovirus_coat protein.
SEQUENCE 218 AA; 24160 MW;
                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                             Owen J., Shintaku M., Aeschleman P., Tahar S., Palukaitis P. "Nucleotide sequence and evolutionary relationships of cucuml virus (CMV) strains: CMV RNA 3.";
J. Gen. Virol. 71:2243-2249(1990).
-l-SIMILARITY: Belongs to the cucumoviruses/bromoviruses coa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 r
OC
                                                                                                                                                                                                                                                                                                                Gen.
- SIM:
  Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match
                                                                                       L; X16386; CAA34422.1; -.
L; D10538; BAA01397.1; -.
; S09663; S09663.
erPro; IPR000247; Cucumovirus_coaterPro; IPR008975; Viral_cap_coat.
n; PF00760; Cucumo_coat; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ssRNA positive-strand viruses, no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      990 (Rel. 14, Created)
990 (Rel. 14, Last sequence update)
998 (Rel. 37, Last annotation update)
tein (Capsid protein) (CP).
mosaic virus (strain I17F) (CMV), an
mosaic virus (strain FNY) (CMV).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                              Belongs to the cucumoviruses/bromoviruses coat
                                                                                                                                                                                                                                                                                                                                                                                         PubMed=2230731;
M., Aeschleman P.,
                                                            Cucumovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ce of the coat protein crus (CMV) strain I17F."
17:10492-10492(1989).
 00.0%;
                              ₹
¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _cap_coat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _coat;
                                                          _coat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 14; DB 1;
Pred. No. 3.7e-07;
Mismatches 0;
  Score
                               C4B4FCB21F197F98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5D3B98298EEA3997
14;
                                                            ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 218 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene',
  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                            cucumber
  218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                °;
                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                           mosai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>
```

Local

S

80

d

ed

7e-

0

```
RESULT
COAT_C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                         Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T_CMVII
COAT_CMVII STANDARD; PRT; 21(
Q83271;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence updi
15-DEC-1998 (Rel. 37, Last annotation updi
15-DEC-1998 (Rel. 37, Last sequence updi
15-DEC-1998 (Rel. 37, Last seque
                                                                                                       Q83269;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence up
15-DEC-1998 (Rel. 37, Last annotation
Coat protein (Capsid protein) (CP).
Cucumber mosaic virus (strain Kor) (CM
Viruses; ssRNA positive-strand viruses
                                                                                                                                                                                                                                                                                                                                                                                             EMBL; D16405; BAA03889.1; -.
InterPro; IPR000247; Cucumoviru
InterPro; IPR008975; Viral_cap_
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat protein.
SEQUENCE 218 AA; 24144 MW;
                                                                                Viruses; ssRNA pos
Cucumovirus.
NCBI_TaxID=117116;
                                                                                                                                                    CMVKO
COAT CMVKO
Q83269;
15-DEC-1998
15-DEC-1998
15-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_Tax1
[1]
SEQUENCE
    [1]
SEQUENCE
Kim S.J.,
Paek K.H.
Submitted
-!- SIMII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sorsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
Karasawa A., Ito A., Okada I., Hase S., Ehara Y.;
"A possible role of RNA 2 of cucumber mosaic cucumoviru
determinant of infection phenotype on cowpea.";
Ann. Phytopathol. Soc. Jpn. 63:289-297(1997).
-!- SIMILARITY: Belongs to the cucumoviruses/bromovirus
                                                                                                                                                                                                                                                                                                                                                      Loca
                                                                                                                                                                                                                                                                                                                                                                   Mat
    k K.H.;
k K.H.;
mitted (SEP-1
SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TaxID=117113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amily.
                                                                                                                                                                                                                                                                                                                                                       Ch
                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \vdash
                                                                                                                                                                                                                                                                                    \vdash
                                                                                                                                                                                                                                                                                                           \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             μ
                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDKS:
                                                                                                                                                                                                                                                                                   MDKS
                                            FROM
Cho
                                                                                                                                                                                                                                                                                                                                        imi
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          imilarity
; Conservat
                                                                                                                                                                                                                                                                                                                                         ilarity 1
Conservati
                                                                                                                                                                                                                                                                                                    — 🛱
                                                                                                                                                                                                                                                                                     Ħ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ħ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - 떠
                                             # Z
                                                                                                                                                                                                                                                                                     Ö.
                                                                                                                                                                                                                                                                                                        − Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ທ.
                                                                                                                                                                                                                                                                                                    — H
                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                     TSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TSAGRNRR
                                                                                                                                                                                                                                                                                                   SAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAGRNRR
     B 0
                                              S
                                                                                                                                                                                                                TANDARD;
    94)
lelo
  l) to
                                             ۲u
                                                                                                                                                                                                                                                                                                                                        100.
100.
ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.
                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14
    the
                                                                                                                                                                                                                                                                                     \vdash
                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                             .
(3)
                                                                                                                                                                                                                                                                                                                                                      0*;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      _cap_c
                                                                                                                                                        sequence up
    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                        0
                  EMBL/GenB
                                             Kwon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                          coat;
                                                                                                                                                                                                                                                                                                                                                        d w
                                                                                                                                                                                                                                                                                                                                         Score 14;
Pred. No. 3
Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     coat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                viruses,
                                                                                                                                                                                                                                                                                                                                                                                                087CF
                                                                                                                                                                                                                ŘŢ
     cucumovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            red. No. 3. Mismatches
                                             a
                                                                                                                             (CMV)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
on update
                                                                                                                                                       update)
on updat
                                                                                                                                                                                                                                                                                                                                                                                                                           \vdash
                                              ŝ
                                                                                                                  Ò
                                                                                                                                                                                                                                                                                                                                                                                                BFCDE90B6EB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   П
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CMV)
                                                                                                                                                                                                                18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 œ
                                             Kwon
                                                                                                                                                                                                                                                                                                                                           ō
                                                                                                                                                                                                                                                                                                                                                       Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 110
                  /DDBJ
                                                                                                                                                                                                                                                                                                                                        DB 1
3.7e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ያ
                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \mathfrak{D}
     e
B
                                                                                                                                                          Ų.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                  DNA
                                                                                                                                                         <u>e</u>)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          œ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cucumovirus .";
     /bromovi
                                              S
                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,7
                  datab
                                                                                                                                                                                                                                                                                                                                           0
                                             Υ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stage;
                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                                                         S. S.
                                                                                                                  ta
                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                CRC64
                                                                                                                Ò
                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                             Pa
                                                                                                                  Œ
     Bur
                                             K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                restrict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bromoviridae
                                                                                                                  Bromovi
                                                                                                                                                                                                                                                                                                                                                                     218
     Õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
     \boldsymbol{\omega}
                                              ഠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ш
     coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      coat
                                              ス
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BL outstation -
ictions on its
is in ro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in no way
or commercial
.ch/announce/
   protein
                                                                                                                  da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESUI
COAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                 Cucumovirus.
Cucumovirus.
NCBI_TaxID=31718;
[1]
P SEQUENCE FROM N.A.
X MEDLINE=91037954; PubMed=2230731;
Ween J., Shintaku M., Aeschleman P., Tah
"Nucleotide sequence and evolutionary re
virus (CMV) strains: CMV RNA 3.";
"""TTY: Belongs to the cucumovi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Mat
Best Loca
Matches
Query Naest Lo
                                               EMBL; D10539; BAA01399.1; -.
InterPro; IPR000247; Cucumovirus_coat.
InterPro; IPR008975; Viral_cap_coat.
Pfam; PF00760; Cucumo_coat; 1.
PRINTS; PR00222; CUCUMOCOAT.
ProDom; PD001284; Cucumovirus_coat; 1.
Coat protein.
SEQUENCE 218 AA; 24243 MW; 75B0BFI
                                                                                                                                                                                                                                                                                                                                                                                                                             CMVM
COAT CMVM
Q00260;
Q1-DEC-19
01-DEC-19
15-DEC-19
Coat prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; L3
InterPro
InterPro
Pfam; PF
PRINTS;
ProDom;
Coat pro
SEQUENCE
                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This S
betwee
the Eu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               use by non-profit institutions as long as it modified and this statement is not removed. Usa entities requires a license agreement (See http: or send an email to license@isb-sib.ch).
            Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L; L36251; AAA46418.1; -.
erPro; IPR000247; Cucumovirus_coat
erPro; IPR008975; Viral_cap_coat.
n; PF00760; Cucumo_coat; 1.
vrs; PR00222; CUCUMOCOAT.
lom; PD001284; Cucumovirus_coat; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation - uropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
            al
al
                                                                                                   Pro; IPR000247; Cucumovirus_coat
Pro; IPR008975; Viral_cap_coat.
PF00760; Cucumo_coat; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                       7-1992
7-1992
7-1998
                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rotein.
  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
Similarity 100.0%;
(4; Conservative (
            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                             992 (Rel. 24, Created)
992 (Rel. 24, Last sequence update)
998 (Rel. 37, Last annotation update)
ein (Capsid protein) (CP).
mosaic virus (strain M) (CMV).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218 AA;
100.0%;
larity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
  <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
Pred.
Score 14; DB 1;
Pred. No. 3.7e-07;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                  viruses,
                                                    75B0BFEB247C93D7 CRC64;
                                                                                                                                                                                                                                                                                   cucumoviruses/bromoviruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04A21106D3D43344 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
No.
                                                                                                                                                                                                                                                                                                                           Tahar S., Palukaitis P., relationships of cucum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; 1
3.7e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                    no DNA stage; Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Usage by and for commercial tp://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
  Indels
                                                                                                                                                                                                                                                                                                                             cucumber mosaic
                           218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218;
                                                                                                                                                                                                                                                                                   coat
  .
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ).
                                                                                                                                                                                                                                                                                     protein
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

MDKSESTSAGRNRR

MDKSESTSAGRNRR

```
COAT CMVN

CMVN

COAT CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

CMVN

                                                                                                                                 밁
                                                                                                                                                                                         ફ
Search completed: |
Job time : 93 secs
                                                                                                                                                                                                                                                Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                       Similarity 100.0%;
14; Conservative 0
                                                                                                                              \vdash
                                                                                                                                                                                         \vdash
                                                                                                                              MDKSESTSAGRNRR
                                                                                                                                                                                       MDKSESTSAGRNRR 14
                            December
                            'n
                                                                                                                                14
                            2004,
                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                         Score 14; DB 1;
Pred. No. 3.7e-0;
Mismatches
                                08:16:51
                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                         07;
                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bromoviridae;
                                                                                                                                                                                                                                                                                                                           218;
                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                           ;
0
```

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum
Maximum
                                                                                                                                                                                                                                                                                   Result
No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring
                                                                                                                                                                                                                                                                                                                                                                                                                                      Databas
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-process
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              00
                                                                                                                                                                                                                                                                                                                                    Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          numbe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                      Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ם ם
                                                                                                                                                                                                                                                                                    Ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              œ œ
                                                                                                                                                                                                                                                                                    Cor
                                                                                                                                                                                                                                                                                                                                      )
19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ħ
                                                                                                                                                                                                                                                                                                                                     No. is t
greater
s derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
    Ŧħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OLIGO
Gapop
   Query
Match
                                                                                                                                                                                                                                                                                                                                                                           6:43:H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US
14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47813
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ecembe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -09-
                                                                                                                                                                                                                                                                                                                                              н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Copyright
                                                                                                                                                                                                                                                                                                                                                                       ssued_Patents_AA:*
/cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                             the nu
                                                                                                                                                                                                                                                                                                                                                                                                                                    sued
                                                                                                                                                                                                                                                                                                                                      Q,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ø
     search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                    number of an or equal y analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
20000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ų
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           )
(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          first
   gs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5,
                                                                                                                                                                                                                                                                                                                                            equal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               using
     ちしこのろろうろう ちちゅうりょうしょうしょうしょうしょうしょしょ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  631
                                                                                                                                                                                                                                                                                                                                                                                                                                                          45
5422259-2
US-08-398-209-2
US-08-398-209-4
US-08-875-233-2
US-08-875-233-4
US-08-875-233-6
US-08-875-233-15
US-09-127-742-2
US-09-127-742-2
US-09-252-991A-22748
US-09-252-991A-22748
US-09-252-991A-22678
US-09-252-991A-22452
US-09-252-991A-23384
US-09-252-991A-23384
US-09-252-991A-31817
US-09-252-991A-31817
US-09-252-991A-31817
US-09-252-991A-31817
US-09-252-991A-31817
US-09-252-991A-31817
US-09-252-991A-31817
US-09-252-991A-31817
US-09-252-991A-35591
US-09-252-991A-31817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cho
                                                                                                                                                                                                                                                                                                                                    results l to the of the t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38
                                                                                                                                                                                                                                                                                                                                                                                                                                                          umma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Œ
                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             version - 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08:02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                    s predicted be score of th
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  idu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ramet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Search time 22 (without alignment 42.202 Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \boldsymbol{\Phi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                               th
                                                                                                                                                                                                                                                                                                                                                       Λq
                                                                                                                                                                                                                                                                                                                                      di
                                                                                                                                                                                                                                                                                                                                              Œ
                                                                                                                                                                                                                                                                                                                                     chance t
result k
istributi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nents)
  Patent No.
Sequence 2
Sequence 3
Sequence 4
Sequence 4
Sequence 6
Sequence 6
Sequence 7
Sequence 7
Sequence 7
Sequence 2
Sequence 3
Sequence 2
Sequence 3
Sequence 3
Sequence 3
Sequence 2
Sequence 3
Sequence 3
Sequence 3
                                                                                                                                                                                                                                                                                                                                     to hav being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seconds
                                                                                                                                                                                                                                                                                   scripti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         updates/se
                                                                                                                                                                                                                                                                                                                                                      have
                                                                                                                                                                                                                                                                                                                                              printed,
  5. 5422259
2. Appli
2. Appli
3. Appli
2. Appli
6. Appli
6. Appli
6. Appli
7. Appli
7
                                                                                                                                                                                                                                                                                    Ö
                                                                                                                                                                                                                                                                                                                                                        þ
```

4 4 5	43	42	41	40	39	38	37	36	ა 5	34	υ u	32	31	30	29	28
տ տ	ហ	ហ	ហ	ហ	ហ	თ	σ	თ	σ	6	6	თ	σ	თ	σ	თ
35.7	າ <u>ເ</u> ກ	<u>.</u>	<b>У</b>	<u>.</u>	<u>5</u>		, N	, N	'n	N	N	N		N	N	
10						w	46	21	S	σ	4	w	7	7	576	σ
NN	N	N	N	<b>-</b>	H	w	4.	4	4	4	4	Ь	4.	4	4.	4.
US-08-090-192-36 US-08-482-663-36	-08-488-027-3	-08-486-569-3	-08-488-031-3	-08-090-193-3	-08-615-181-9	-09-134-001C-446	-09-252-991A-3008	-09-252-991A-324	-09-252-991A-1865	-09-194-468A-30	-09-248-796A-1919	-08-605-541B-1	-09-171-699-	-09-171-699-6	-09-252-991A-	9-812-07
sequence 36, Appl Sequence 36, Appl	equence 36, Ap	equence 36,			3, App	Sequence 4463, Ap	Sequence 30085, A	$\mathbf{r}$	Sequence 18657, A	Sequence 30, Appl	9191,	Sequence 12, Appl	, Appl	equence	equence 23246,	Sequence 2, Appli

## ALIGNMENTS

```
; Patent No. 5422259
; APPLICANT: DE BOTH, MICHIEL; BEN
; PERRET, JOEL
; TITLE OF INVENTION: TRANSGENIC
; SPECIES CUCUMIS MELO
; NUMBER OF SEQUENCES: 4
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/27
; FILING DATE: 05-MAR-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 566,255
; FILING DATE: 13-AUG-1990
                                                                                                                                                                                                                                                                      RESULT 2
US-08-398-2
; Sequence
; Patent No
; GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UT --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 1
5422259-2
;Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E O
APPLICANT: DeBoth, Michiel
APPLICANT: No. 57896561, Marianne
APPLICANT: Ben Tahar, Sophia
APPLICANT: Ben Tahar, Sophia
APPLICANT: Perret, Joel
TITLE OF INVENTION: Transgenic Plant
TITLE OF INVENTION: Species Cucumis
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merchant & Gould
STREET: 90 South 7th Street, 3100
CITY: Minneapolis
STATE: MN
COUNTRY: USA
ZIP: 55402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  D NO:2:
LENGTH:
9-2
                                                                                                                                                                                                                                                                       ce 2, Application US/08398209
No. 5789656
AL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                         th 100.0%; Similarity 100.0%; 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                              MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MICHIEL; BEN TAHAR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRANSGENIC
                                                                                                                                                                                Transgenic Plants Belonging Species Cucumis Melo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           us/08/27,
                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 14; DB 6;
Pred. No. 2.6e-07;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ப
                                                                                                                          3100
                                                                                                                          No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BELONGING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOPHIA; NOEL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                         5789656west
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 217;
                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MARIANNE;
                                                                                                                                                                                                   the
                                                                                                                          Center
                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

0

也,但这些一<del>个</del>

```
RESULT 3
US-08-398-209-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 08/027,563
FILING DATE: 05-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/566,255
FILING DATE: 13-AUG-1990
PRIOR APPLICATION NUMBER: FR 8910848
FILING DATE: 11-AUG-1989
ATTORNEY/AGENT INFORMATION:
NAME: Hillson, Randall A.
REGISTRATION NUMBER: 31,838
REFERENCE/DOCKET NUMBER: 8076.21USO:
TELEPHONE: 612-332-5300
TELEPHONE: 612-332-9081
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application: Patent No. 5789656
GENERAL INFORMATION:
                                                                              NUMBER OF SEQUENCES: 4

CORRESPONDENCE ADDRESS:

ADDRESSEE: Merchant & Gould

STREET: 90 South 7th Street, 3100

CITY: Minneapolis

STATE: MN

COUNTRY: USA

ZIP: 55402

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, 1

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/398,209

FILING DATE:

CLASSIFICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

CLASSIFICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-
APPLICATION NUMBER: US 08, FILING DATE: 05-MAR-1993 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 07, FILING DATE: 13-AUG-1990 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATE APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                APPLICANT: Perret, Joel TITLE OF INVENTION: Tra
                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
TITLE OF I
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                                               4,
ت
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
Similarity 100.0%;
L4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08398209
789656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                     DeBoth, Michiel
No. 57896561, Ma
Ben Tahar, Sophi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DATA
                                                                                                                                                                                                                                                                                                                                                Transgenic Plants Belonging to Species Cucumis Melo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acids
                                                                                                                                                                                                                                                                                                                                                                                      561, Marianne
, Sophia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Release
                                                                                                                               US/08/398,209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/398,209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08/027,563
93
                                                                      08/027,563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8076.21US02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 14; DE Pred. No. 2.6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #1.0,
                                                                                                                                                           #1.0,
                                                                                                                                                                                                                                                                                          3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Version
                                                                                                                                                             Version
                                                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1
2.6e-
                                                                                                                                                                                                                                                                                          5789656west
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                          Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
멍
                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT OS-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-398-
                                                                                                                   US-08-553-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FR 8910848
FILING DATE: 11-AUG-1989
ATTORNEY/AGENT INFORMATION:
NAME: Hillson, Randall A.
REGISTRATION NUMBER: 31,838
REFERENCE/DOCKET NUMBER: 8076.210
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
TELEPHONE: 612-332-9081
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
IS-08-398-209-4
                                                                                                                                               CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Marcus-Wyner, Lynn
REGISTRATION NUMBER: 34,869
REFERENCE/DOCKET NUMBER: 137-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/354-3588
TELEFAX: 415/857-1125
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 218 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                        Query Mato
Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Patent No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,619;
FILING DATE: December 1, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL
                                                                                                                                 MOLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
NUMBER
CORRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
CITY:
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDI
                                                                                                                               OPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LICANT: DeHaan, Petrus T.
LE OF INVENTION: Virus Resistant
SER OF SEQUENCES: 30
RESPONDENCE ADDRESS:
DDRESSEE: No. 5919705artis Crop P.
TREET: 975 California Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
                                                                                                                     619B-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3, Application US/085536198
5. 5919705
                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                        14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDKSESTSAGRNRR 14
                                                        100.0%;
Similarity 100.0%;
L4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
Similarity 100.0%;
.4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Palo Alto
                MDKSESTSAGRNRR 14
 MDKSESTSAGRNER 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                      JMBER: US/08/553,619B
December 1, 1995
                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Petrus T.
Virus Resistant Plants
: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8076.21US02
                                                       0
                                                                                                                                                                                                                                                                  137-1082/PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 14;
Pred. No.
                                                        Score 14; DB 2;
Pred. No. 2.6e-07;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                    Ó
                                                                                                                                                                                                                                                                                                                                                                                    Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; I
2.6e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,,</u>
                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 218;
                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                     218;
                                                        <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                         <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,,</u>
```

dr.

```
RESULT 6
US-08-875-233-4
; Sequence 4, A
; Patent No. 61
                                                                                                                                                                                                                                                                             $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
US-08-875-233-
                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0,

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/875,233

FILING DATE: 26-JUN-1997

CLASSIFICATION: 800

CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL
                                                                                                                                                                                                                                                                                                                                               MOLECULE T
08-875-233-2
                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 312-616-5460 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                             GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUE
CORRESPONDENCE
ADDRESSEE: R
COUNTRY:
ZIP: 600
COMPUTER RE
                                                                                                APPLICANT:
APPLICANT:
TITLE OF IN
                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Lisa V. Mueller TELECOMMUNICATION INFORMATION: TELEPHONE: 312-616-5400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Carney, Kim J
TITLE OF INVENTION: Plan
TITLE OF INVENTION: Cucu
NUMBER OF SEQUENCES: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                          TITLE OF INVENTION: CUNUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET:
CITY: (
STATE:
                               STREET:
CITY: C
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60089
                                                                                                                                                                                                                                                                                                   14;
                                                                                                                                                                                       , Application 6127601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , Application 6127601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chicago
Illinois
                                                                                                                                                                                                                                                                                              100.0%;
Similarity 100.0%;
(4; Conservative
                                                                                                                                                                                                                                                                                                                                                                   amino acıq
XGY: linear
                                                                                                          T: Carney, INVENTION:
                                         Chicago
                                                                                                                                                                                                                                                        MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                    MDKSESTSAGRNRR 14
  READABLE
                                 Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              McMaster, J. Ruse
Tricoli, David M
Reynolds, John F
                                                                                                                                                                                                                                                                                                                                                                                          218 amino
                                                      Rockey, M:
2 Prudential
                                                                                                                                McMaster, J. Rus
Tricoli, David I
Reynolds, John
                    U.S.A.
                                                                                                                                                                Boeshore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rockey, Milnamow Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    льк: US/08/875,233
26-JUN-1997
                                                                                                                                                                                                                                                                                                                                                         protein
  FORM:
                                                                                                                        Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08875233
                                                                                                                                                                                                    US/08875233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plants Resistant
Cucumber Mosaic
                                                                                                  Cucumber
                                                                                                            Plants
                                                                                                                                                                                                                                                                                                                                                                                            acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      John F
                                                                                                                                                       Maury
J. Rus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Milnamow
                                                                  Milnamow
                                                                                                                                                                                                                                                         14
                                                       Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Russell
                                                                                                                                                       Russell
                                                                                                            Resistant
                                                                                                                                                                                                                                                                                                    ..
0
                                                                                                                                                                                                                                                                                                              Score 14;
Pred. No.
                                                                                                  Mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             & Katz,
180 N.
                                                       & Katz,
180 N.
                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        t to C
Virus
                                                                                                  Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Ltd.
Stetson,
                                                       , Ltd.
Stetson,
                                                                                                                                                                                                                                                                                                              DB 3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strains
                                                                                                             Strains
                                                                                                                                                                                                                                                                                                             07;
                                                                                                                                                                                                                                                                                                    0
``
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Suite
                                                       Suite
                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                    Indels
                                                                                                             0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4700
                                                       4700
                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                    0
```

```
RESULT 7
US-08-875-233-6
; Sequence 6, Application US/08875233
; Patent No. 6127601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-875-
US-08-875-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:

NAME: Lisa V. Mueller

TELECOMMUNICATION INFORMATION:

TELEPHONE: 312-616-5400

TELEFAX: 312-616-5460

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 218 amino acids
      ATTORNEY/AGENT INFORMATION:

NAME: Lisa V. Mueller

TELECOMMUNICATION INFORMATION:

TELEPHONE: 312-616-5400

TELEFAX: 312-616-5460

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

LENGTH: 218 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                            APPLICANT: McMaster, J. Russell
APPLICANT: Tricoli, David M
APPLICANT: Reynolds, John F
APPLICANT: Carney, Kim J
TITLE OF INVENTION: Cucumber Mosai
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Milnamow & Ka
STREET: 2 Prudential Plaza, 180 |
CITY: Chicago
STATE: Illinoin
                                                                                                                                                                              COUNTRY: U.S.A.
ZIP: 60089
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ve.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/875,233
FILING DATE: 26-JUN-1997
CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 26-JUI CLASSIFICATION: 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               233-4
233-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TH: 218 amino acids
: amino acid
)LOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                        RY: U.S.A. 60089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n 100.0%;
Similarity 100.0%;
L4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MBER: US/08/875,233
26-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    800
                                                                                                                                                                                                                                                                                                                                                                                                                                  Plants Resistant
Cucumber Mosaic 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 14; us
Pred. No. 2.6
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                      & Katz, Ltd.
180 N. Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version #1.30
                                                                                                                                                                                                                                                 Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Virus
                                                                                                                                                                                                                                                                                                                                                                                                     Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3; I
2.6e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strains of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                        Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

Mat

tch

100.0%;

Score

14;

DΒ

u ••

Length

218;

Local

Similarity

100.

08;

```
8
                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
US-08-875-233-15
                                                                                                                                          RESULT 9
US-09-127-742-
                                                                                                                                                                                      명
                                                                        Sequence 2, Application US/0912; Patent No. 6198022; GENERAL INFORMATION:
APPLICANT: DE BOTH, MICHAEL; APPLICANT: NOEL, MARIANNE
APPLICANT: TAHAR, SOPHIA BEN
Sequence 19
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                            Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                      TYPE: amino a TOPOLOGY: lime MOLECULE TYPE: -08-875-233-15
                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: U.S.A.

ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Ve

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/875,233

FILING DATE: 26-JUN-1997

CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL
                                                                                                                                                                                                                                                                                                                            TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Carney, TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
STREET: 2
CITY: Chic
STATE: 111
                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                   Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ...: U.S.A.
60089
                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>1</u>4
                                                                                                                                                                                                         μ
                                                                                                                                                                                                                            100.0%;
Similarity 100.0%;
.4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application 6127601
                                                                                                                                                                                     MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chicago
Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 McMaster, J. Ruse
Tricoli, David M
Reynolds, John F
                                                                                                                                                                                                                                                                                                                  218 amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rockey, Mi
Prudential
                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                         acid
                                                                                                                                                                                                                                                                                   protein
            1998-08-03
                                                                                                                                US/09127742A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plants
                                                                                                                                                                                                                                                                                                                     acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08875233
                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Russell
                      US/09/127,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Resistant
er Mosaic V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>0</u>
                                                                                                                                                                                                                              0;
                                            PLANTS
                                                                                                                                                                                                                                          Score 14;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 2. Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  & Katz,
180 N.
                                                                                                                                                                                                                              ore 14; DB 3; ced. No. 2.6e-07; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Version
                                            BELONGING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           t to C
Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stetson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.6e-07;
nes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                   #1.
                                            Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suite
                                                                                                                                                                                                                                                   Length
                                            THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4700
                                            SPECIES
                                                                                                                                                                                                                                                     218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                               o
;:
                                            CUCUMIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                              Gaps
                                            MELO
                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
```

```
RESULT 11
5422259-4
; Patent No.
; APPLIC
                                                                                                                                                                                                                               ; ORGANIS
US-09-127-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
US-09-127-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; LENGTH: 218
; TYPE: PRT
; ORGANISM: cucumber mosaic
US-09-127-742-2
                                                                                                                                   멍
                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
PERRET, JO
TITLE
SPECIES CU
NUMBER
CURREN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
Matches 1
                                                                                                                                                                                 Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Patent No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
TITLE OF IN
FILE REFERE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EARLIER
EARLIER
EARLIER
EARLIER
NUMBER C
                                                                                                                                                                                                                                                                                                   CURRENT
CURRENT
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EARLIER
EARLIER
EARLIER
EARLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE
SEQ ID NO
                                                                                                                                                                                                                                                                              O
                                                                                                                                                                                                                                                                                         SOFTWARE:
                                                                                                                                                                                                                                                      TYPE: I
                                                                                                                                                                                                                                                                              U
                                                                                                                                                                                                                                                                                     OF INVENTION: TRANSGENIC PLANTS BELONGING TO REFERENCE: 8076.21USD2

NT APPLICATION NUMBER: US/09/127,742A

NT FILING DATE: 1998-08-03

ER APPLICATION NUMBER: 08/398,209

ER APPLICATION NUMBER: 08/027,563

ER FILING DATE: 1993-03-05

ER APPLICATION NUMBER: 07/566,255

ER APPLICATION NUMBER: 07/566,255

ER APPLICATION NUMBER: FR 89 10848

ER FILING DATE: 1989-08-11

R OF SEQ ID NOS: 4

ARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R APPLICATION NUMBER: 08/398,209
R FILING DATE: 1995-03-02
R APPLICATION NUMBER: 08/027,563
R FILING DATE: 1993-03-05
R APPLICATION NUMBER: 07/566,255
R FILING DATE: 1990-08-13
R APPLICATION NUMBER: FR 89 10848
R FILING DATE: 1989-08-11
OF SEQ ID NOS: 4
           ICANT: DE BOTH, M
JOEL
B OF INVENTION: T
CUCUMIS MELO
ER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                     OF.
                                                                                                                                                                                            tch
                                                                                                                                                                                                                                                      : 218
PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4, Application US/09127742A
o. 6198022
INFORMATION:
   ij
                                                                                                                                                                                                                               SM: cucumber mosaic
742-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14;
                                                                                                                                                                                  14;
                                                                                                                                                                              100.0%;
Similarity 100.0%;
.4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DE BOTH, MICHAEL
NOEL, MARIANNE
TAHAR, SOPHIA BEN
PERRET, JOEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
Similarity 100.0%;
.4; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PatentIn
   APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDKSESTSAGRNRR 14
                                                                                                                                   MDKSESTSAGRNRR 14
                                                                                                                                                   MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ver.
                                     TRANSGENIC PLANTS
                                                             MICHIEL; BEN TAHAR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
0
                                                                                                                                                                                                                                             virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus
                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 14; DB 3;
Pred. No. 2.6e-07;
Mismatches 0;
                                                                                                                                                                                  Score 14; DB 3;
Pred. No. 2.6e-07;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10848
                                     BELONGING
                                                             SOPHIA; NOEL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                     or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                     THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                       HE
                                                              MARIANNE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SPECIES CUCUMIS MELO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 218;
                                                                                                                                                                                  <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                   Gaps
                                                                                                                                                                                   <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÷
```

```
RESULT 13
US-09-252-991
; Sequence 22
; Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
US-08-875-233-10
                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ن</u> م
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422259-
                                                                                                                                                                                                   NAME: Lisa V. Mueller
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
TELEFAX: 312-616-5460
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Ma
Best Loc
Matches
                                                                                                             Query Match 85.7%;
Best Local Similarity 100.0%;
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                           ZIP: 60089

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-D

SOFTWARE: PatentIn Release #1

CURRENT APPLICATION DATA:
                                                                                                                                                       08-875
                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rockey, Mi:
STREET: 2 Prudential |
CITY: Chicago
STATE: Illinois
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/01 FILING DATE: 05-MAR-1993 PRIOR APPLICATION DATA: APPLICATION NUMBER: 566, 29 FILING DATE: 13-AUG-1990
                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
FILING DATE: 26-JUN-
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMA:
                                                                                                                                                               TYPE: amino TOPOLOGY: li: MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                              SEQUENCE O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
13
252-991A-22748
lence 22748, Applic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NO:4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10, Application US/08875233
). 6127601
                                                                                                                                                                                                                                                                                                                                                                            RY: U.S.A.
60089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                MDKSESTSAGRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MDKSESTSAGRNRR
                                                                      MDKSESTSAGRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDKSESTSAGRNRR
                                                                                                                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            218
                                                                                                                                                                                                                                                                                                                                                                                                                      Rockey, Milnamow
2 Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tricu-
Reynolds, Jou...
They, Kim J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     McMaster, J. Ru
Tricoli, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Boeshore,
                                                                                                                                                                         linear
                                                                                                                                                                                      acid
                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                UMBER: 566,255
13-AUG-1990
                                                                                                                                                                                               amino
                                                                                                                                                                                                                                                                                          26-JUN-1997
                                                                                                                                                               protein
                   cation
                                                                                                                                                                                                                                                                                  800
                                                                                                                                                                                              acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plants Resistant Cucumber Mosaic
                                                                                          12
                                                                                                                                                                                                                                                                                                                                                                                                                                Milnamow
                                                                                                                                                                                                                                                                                                                                                                                                                                                    15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              John F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maury L
                                                                                                                                                                                                                                                                                                     US/08/875,233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                   US/09252991A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Russell
                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                       Score 12;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                          #1.
                                                                                                                                                                                                                                                                                                                                    -DOS
                                                                                                                                                                                                                                                                                                                                                                                                                      & Kat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatche
                                                                                                               Mismatche
                                                                                                                                                                                                                                                                                                                        Ö
                                                                                                                                                                                                                                                                                                                                                                                                                        z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
No.
                                                                                                                                                                                                                                                                                                                          Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                              virus
                                                                                                                                                                                                                                                                                                                                                                                                                     Stetson,
                                                                                                                       DB 3;
3e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.6e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
                                                                                                               Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07;
                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                      Suite
                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
f
                                                                                                                                                                                                                                                                                                                                                                                                                      4700
                                                                                                                                 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            218;
                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                             Gaps
                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
RESULT 14
US-09-513-
; Sequence
                                                                                                                                                                                                                                                                                                                                           ; Patent No. 6783961
; FILE REFERENCE: 59.US2.REG
; CURRENT APPLICATION NUMBER: US/09/513,999;
CURRENT FILING DATE: 2000-02-24
; PRIOR APPLICATION NUMBER: US 60/122,487
; PRIOR FILING DATE: 1999-02-26
; NUMBER OF SEQ ID NOS: 36681
; SOFTWARE: Patent.pm
; SEQ ID NO 7876
$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-252-
                         Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
TITLE OF IN
Patent No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Mat
Best Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                        OTHER INFORMATION FEATURE:
NAME/KEY: UNSURE LOCATION: 81
OTHER INFORMATION
-09-513-999C-7876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -09-513-999C-7876
Sequence 7876, Application US/09513999C
Patent No. 6783961
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 82
TYPE: PRT
ORGANISM: Pseudomonas a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICAN
TITLE OF
TITLE OF
FILE REF
CURRENT
CURRENT
PRIOR AF
                                                                                                                                                                                                                                          NAME/KEY: SIGNAL
LOCATION: -19..-1
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR PRIOR
                                                                                                                                                                                                   OTHER INFORMATION FEATURE:
NAME/KEY: UNSURE LOCATION: 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Dumas Milne Edwards, APPLICANT: Duclert, A. APPLICANT: Giordano, J.Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER
                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Homo
                                                                                                                                                               FEATURE:
NAME/KEY: UNSURE
                                                                                                                                                     LOCATION:
                                                                                                                                                                                         OTHER
                                                                                                                                                                                                                                                                                             FEATUR!
                                                                                                                                                                                                                                                                                                                                 LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ID NO 22748
ENGTH: 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \nabla \nabla \nabla \nabla \nabla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANT: Marc J. Rubenfield et al.

OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING

OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

EFERENCE: 107196.136

I APPLICATION NUMBER: US/09/252,991A

IF FILING DATE: 1999-02-18

APPLICATION NUMBER: US 60/074,788

FILING DATE: 1998-02-18

APPLICATION NUMBER: US 60/094,190

OF SEQ ID NOS: 33142
                                                                                                                                                                                                                                                                                                                                                                                                                                              NT: Giordano, J.Y.
F INVENTION: Expressed Sequence Tags and Encoded Human
o. 6783961
                                                                           INFORMATION:
999C-7876
                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
 J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                         42.9%;
Similarity 100.0%;
6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 6; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGRNRR 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGRNRR 14
                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                         Xaa=
                                                                                     Xaa=Arg
                                                                                                                                        Xaa=Leu
                                                                                                                                                                                                                                         seq HLMSLVTSTSASA/SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42.9%;
100.0%;
tive (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aeruginosa
                                                                                       or
                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                       US/09/513,999C
                                                                                                                                                                                         8
                        Score 6; DB 4
Pred. No. 25;
0; Mismatches
                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 6; DB 4
Pred. No. 19;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                         Сув
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J.B.
                                                                                                                                                                                         ဝူ
                                     DB 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19;
                                   4.
                        0;
                                                  Length 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82;
                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PSEUDOMONAS
                         0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
RESULT 15

US-09-252-991A-24703
; Sequence 24703, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
; APPLICANT: Marc J. Rubenfield et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO FITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
; TILE REFERENCE: 107196.136
; CURRENT APPLICATION NUMBER: US/09/252,991A
; CURRENT FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: US 60/074,788
; PRIOR APPLICATION NUMBER: US 60/074,788
; PRIOR APPLICATION NUMBER: US 60/074,190
; PRIOR FILING DATE: 1998-07-27
; NUMBER OF SEQ ID NOS: 33142
; SEQ ID NO 24703
; LENGTH: 146
; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-24703
                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                   8
Search completed: December Job time: 23 secs
                                                                                                                                 Query Match
Best Local S
Matches 6
                                                                  131
                                                                                                  9
                                                                                                                                42.9%; Similarity 100.0%; 6; Conservative 0;
                                                               AGRNRR
|||||
AGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TSAGRN 68
                                                                  136
                                                                                                  14
               ຫ
•
               2004,
                                                                                                                                Score 6; DB 4;; Pred. No. 31; 0; Mismatches
                08:17:48
                                                                                                                                   0;
                                                                                                                                                                 Length 146;
                                                                                                                                    Indels
                                                                                                                                   0;
                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            PSEUDOMONAS
                                                                                                                                   0;
```

Ś

```
Title:
Perfect
Sequence
                                                                                                                                                                                                                                                                                                                            Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Databas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      coring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     arched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          မ္
      8
                                                                                                                                                                                                                                                                                                                                                                               Pred
score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
(P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ወ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tabl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
DB
                                                                                                                                                                                                                                                                                                                             Sco
                                                                                                                                                                                                                                                                                                                                                                                ře
Ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq
geq
                                                                                                                                                                                                                                                                                                                                                                               No. is the greater to greater to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length:
    100.0
100.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OLIGO
Gapop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-1
14
1 MDKS
                                                                                                                                                                                                                                                                                                                            Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hit
                                                                                                                                                                                                                                                                                                                                                                                                                          4 2 2 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cemb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copyright
                                                                                                                                                                                                                                                                                                                                                                                           the nu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                                         79: * pir1: pir2: pir3: pir4:
                                                                                                                                                                                                                                                                                                                                                                                 þу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60.0
                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                               number of requal
or equal
or analysis o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \infty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ř.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7-841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         first
      ds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2004,
                                                                                                                                                                                                                                                                                                                              D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapext
      45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cho
   JQ1253
JQ1254
JS0090
VCVXY1
JC6075
S42098
S58039
JC6074
JC6073
S09663
JA0136
D71392
JQ2176
T17609
T47771
JQ0139
S28733
T08230
T24125
E83109
I39141
T24118
T724126
E87451
T00756
E84714
E84714
                                                                                                                                                                                                                                                                                                                                                                               results 1 to the of the t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        summari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             version
- 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :07:32
                                                                                                                                                                                                                                                                                                                                                             UMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            O
                                                                                                                                                                                                                                                                                                                                                                               s predict
e score c
total sc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             arame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       idue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Search time 21 : (without alignment) 64.145 Million cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Œ
                                                                                                                                                                                                                                                                                                                                                                                           of t
                                                                                                                                                                                                                                                                                                                                                                                of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                                                                                                                                                                                                                                                                     γd
                                                                                                                                                                                                                                                                                                                                                                                by chance the result he distributi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ments)
coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc coat protein - cuc hypothetical prote transcription fact hypothetical prote conserved hypothetical prote conserved hypothetical prote probable protein k chemotaxis moth protein chemotaxis moth protein chemotaxis moth protein coligopeptide ABC t
                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                              to hav being tion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                     have
                                                                                                                                                                                                                                                                                                                                                                                          print
                                                                                                                                                                                                                                                                                                                                                                                                     (C)
                                                                                                                                                                                                                                                                                                                                                                                            ed
```

1 WMBETW 2 A42496 2 A42496 2 A42496 2 A42496 2 A42496 2 S14780 3 S44492 3 S44492 3 H95270 2 F13336 2 T13331 2 A47973 2 T20241 2 T20241 2 T33369 2 A47973 2 A
--

```
coat protein - cucumber mosaic virus (strain C; Species: cucumber mosaic virus, CMV A; Note: host Nicotiana tabacum cv. Xanthi nc C; Date: 30-Jun-1990 #sequence_revision 30-Ju C; Accession: JA0097 R; Nitta, N.; Masuta, C.; Kuwata, S.; Takanam Ann. Phytopathol. Soc. Jpn. 54, 516-522, 198 A; Title: Comparative studies on the nucleoti A; Reference number: JA0096 A; Accession: JA0097 A; Molecule type: mRNA A; Residues: 1-218 <NIT> A; Cross-references: UNIPROT: P18027 R; Tsunasawa, S.; Narita, K. J. Biochem. 92, 607-613, 1982 A; Title: Micro-identification of amino-termi A; Reference number: A61297; MUID: 83056735; PA; Contents: annotation; acetylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JS0090
Coat protein - cucumber mosaic virus (strain O)
C;Species: cucumber mosaic virus, CMV
C;Date: 31-Mar-1992 #sequence_revision 05-Aug-1994 #text_change
C;Accession: JS0090; pS0314
R;Hayakawa, T.; Mizukami, M.; Nakajima, M.; Suzuki, M.
J. Gen. Virol. 70,.499-504, 1989
A;Title: Complete nucleotide sequence of RNA 3 from cucumber mo
A;Reference number: JS0089; MUID:89279231; pMID:2732698
A;Accession: JS0090
A;Molecule type: mRNA
A;Residues: 1-218 <HAY>
A;Cross-references: UNIPROT:P16489; GB:D00385; NID:g222030; PID
A;Accession: PS0314
A;Molecule type: protein
A;Residues: 216-218 <HA2>
R;Tsunasawa, S.; Narita, K.
J. Biochem. 92, 607-613, 1982
A;Title: Micro-identification of amino-terminal acetylamino aci
A;Reference number: A61297; MUID:83056735; PMID:6754709
A;Contents: annotation; acetylation
C;Genetics:
A;Map position: segment 3
C;Superfamily: cucumber mosaic virus coat protein
C;Keywords: acetylated amino end; coat protein
F;1/Modified site: acetylated amino end (Met) #status experimen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Reference number: A61297; MU
A; Contents: annotation; acetyl
C; Comment: This cucumber mosaic
C; Superfamily: cucumber mosaic
C; Keywords: acetylated amino e
F; 1/Modified site: acetylated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Best I
Match
                                                                                                                                                                                                                                                                                                                                                                                                              Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ches
                                                                                                                                                                                                                                                                                                                                                                                                                         Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                         Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e number: A6129/; .....: annotation; acetylation
This cucumber mosaic virus
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ch
                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MDKS
                                                                                                                                                                                                                                                                                                                                                      MDKS
                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
imilarity 100.0%;
; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
imilarity 100.0%;
; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                 MDKSE
                                                                                                                                                                                                                                                                                                                                                      国-
                                                                                                                                                                                                                                                                                                                                                                     STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                acetylated
                                                                                                                                                                                                                                                                                                                                                     STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MUID:83056735;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               end;
                                                                                                                                                                                                                                                                                                                                                                                 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                   coat produced amino er
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ic virus strain
virus coat pro
end; coat protei
                                                                                                                                                                   S.; Takanami,
516-522, 1989
the nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                         Score 14; Depred. No. 8. Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 14; I
Pred. No. 8.
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       riduc
coat protein
end (Mer'
                                                                                                                                                                                                                                                                           (strain
                                                                                                                                                                                                                              thi nc (t
                               rminal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PMID:6754709
                                                                                                                                                                                                                              (tobacco)
1-1990 #te
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1
8.9e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         induces
                                                                                                                                                                                                                                                                                                                                                                                                            DB 1
3.9e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #status
                                                                                                                                                                                                     к
                                                                                                                                                                    sequenc
                                 acetylamino 6754709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>۲</u>
                                                                                                                                                                                                                                                                                                                                                                                                               008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n cucumber
32698
                                                                                                                                                                                                                              ext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           മ
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       experiment
                                                                                                                                                                      መ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              experimenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          yellow
                                                                                                                                                                   of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _change
                                                                                                                                                                                                                              _change
                                                                                                                                                                    cucumber
                                                aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIDN:BAA00297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chlorosi
                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                               09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ü.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                 ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                            ~.
                                                                                                                                                                     mosaic
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proteins
                                              proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CMV)
                                                                                                                                                                     rus
                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PID:g22203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            strain
                                                                                                                                                                     RNA3
                                                                                                                                                                      Ω
```

```
coat protein - cucumber mosaic virus (strain CS)

C.Species: cucumber mosaic virus (strain CS)

C.Species: cucumber mosaic virus, CMV

C.Date: 21-Jan-1997 #sequence_revision 21-Jan-1997 #text_change 09-Jul-2004

C.Accession: JC6075

R.Huaping, L.; Hu, J.S.; Barry, K.; Hweichung, F.

Chinese J. Virol. 12, 235-242, 1996

A;Title: Coat protein gene sequence analysis of three cucumber mosaic virus strains infect A;Reference number: JC6073

A;Accession: JC6075

A;Molecule type: mRNA

A;Residues: 1-218 x;HUA>

A;Coss-references: UNIPROT:08JPX2; UNIPROT:09DJX2; UNIPROT:091PK5; UNIPROT:09DJX3; UNIPROT:08JPX6; UNIPROT:09JPX6; UNIPROT:09JFX4; UNIPROT:09DJX3; UNIPROT:08JPX6; UNIPROT:09JFX4; UNIPROT:09DX3; UNIPROT:08JPX6; UNIPROT:09JFX4; UNIPROT:09DX3; UNIPROT:08JPX6; UNIPROT:09JFX4; UNIPROT:09DWW2; UNIPROT:08JPX6; UNIPROT:09JFX4; UNIPROT:09DWW2; UNIPROT:09JFX4;                                                                                                                                                                                                                                                                         coat protein - cucumber mosaic virus
C;Species: cucumber mosaic virus, CMV
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #
C;Accession: S42098
R;Hyon, S.; Park, Y.I.
submitted to the EMBL Data Library, February 1994
A;Description: Nucleotide sequence of cDNA from RNA4
A;Reference number: S42098
A;Accession: S42098
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Comment:
C; Genetics:
A; Map posit
C; Superfami
C; Keywords:
F; 1/Modifie
                                                                                                                                                                                  A; Molecule 1
A; Residues:
A; Cross-ref
C; Superfami
                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RES
S42
뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                     Query
Best I
Matche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             860
TID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ma
                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tion: segment RNA3
ily: cucumber mosaic
: acetylated amino er
                                                                                                                                                                                ferences: UNIPROT:Q66154; EMBL:X77855; NID:g457166;
ily: cucumber mosaic virus coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ily: cucumber mosaic virus coat protein
: acetylated amino end; coat protein
ed site: acetylated amino end (Met) #st
                                                                                                                                                                                                                        type: mRNA
1-218 <HYO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 c
c
                                                                                     h 100.0%;
Similarity 100.0%;
14; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
Similarity 100.0%;
L4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
Similarity 100.0%;
L4; Conservative (
                                        MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MDKSESTSAGRNRR 14
MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genome
                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        consists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      coat pro
                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      three
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 14; DB Pred. No. 8.9); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 14; DB 2;
Pred. No. 8.9e-08;
Mismatches 0;
                                                                                        Score 14; DB 2;
Pred. No. 8.9e-08;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                             06-Jan-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single-stranded,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8.9e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #status
                                                                                                                                                                                                                                                                                                                                                     RNA4
                                                                                                                                                                                                                                                                                                                                                                                                                                             #text
                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                      Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      experimental
                                                                                                                                                                                                                                                                                                                                                cucamber
                                                                                                                                                                                                                                                                                                                                                                                                                                        _change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      positive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             218;
                                                                                                                                                                                                          PIDN: CAA54846.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                             09-Jul-2004
                                                                                         0
                                                                                                                                                                                                                                                                                                                                                   mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNAs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                         Ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                   virus-As
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        designated RNA1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                            0
                                                                                                                                                                                                         PID:g45716
                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                      Kork
```

```
RESULT 8

JC6074

coat protein - cucumber mosaic virus (str C; Species: cucumber mosaic virus, CMV
C; Date: 21-Jan-1997 #sequence_revision 21
C; Accession: JC6074
R; Huaping, L.; Hu, J.S.; Barry, K.; Hweic Chinese J. Virol. 12, 235-242, 1996
A; Title: Coat protein gene sequence analy A; Reference number: JC6073
A; Accession: JC6074
A; Molecule type: mRNA
A; Residues: 1-218 <HUA>
A; Cross-references: UNIPROT:Q83257; UNIPRA; Note: the authors translated the codon C; Genetics:
A; Gene: cp.
C; Superfamily: cucumber mosaic virus coat C; Keywords: coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              submitted to .... 58
A; Reference number: S58
A; Accession: S58039
A; Status: preliminary
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-218 < HAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
S58039
capsid protein - cucu
C; Species: cucumber n
C; Date: 13-Jan-1996 #
C; Accession: S58039
R; Haq, Q.M.R.
submitted to the EMBI
Coat protein - cucumber mosaic virus (strain BS)

C;Species: cucumber mosaic virus, CMV

C;Date: 21-Jan-1997 #sequence_revision 21-Jan-1997 #text_change 09-Jul-2004

C;Accession: JC6073

R;Huaping, L.; Hu, J.S.; Barry, K.; Hweichung, F.

Chinese J. Virol. 12, 235-242, 1996

A;Title: Coat protein gene sequence analysis of three cucumber mosaic virus strains infe
A;Reference number: JC6073

A;Recession: JC6073

A;Recession: JC6073

A;Residues: 1-218 <HUA>
A;Residues: 1-218 <HUA>
A;Cross-references: UNIPROT:Q9DJW8; UNIPROT:Q9YJR7; UNIPROT:Q8JPX1; UNIPROT:Q9E2V6; UNIPROT:Q91P6; UNIPROT:Q9JFY4; UNIPROT:Q9E2V6; UNIPROT:Q91P6; UNIPROT:Q9JFY4; UNIPROT:Q9E2V6; UNIPROT:Q91P6; UNIPROT:Q9YJS2; UNIPROT:Q9JFY4; UNIPROT:Q9E2V6; UNIPROT:Q9TJS2; UNIPROT:Q9JFX4; UNIPROT:Q9DWW2; UNIPROT:Q9DWW2; UNIPROT:Q9YJS2; UNIPROT:Q9DWW2; UNIPROT:Q9DW2; UNIPRO
                                                                                                                                                                                                                                                                                                                                RESULT
JC6073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Residues: 1-218 < HAQ>
A; Cross-references: UNIPROT: Q66157; C; Superfamily: cucumber mosaic virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \mathbf{r}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
Similarity 100.0%;
4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                     ADKS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MDKS
                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; imilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL Data
er: S58039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                         [7] -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                      STSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rary,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hweichung,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL:X89652; | coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UNIPROT:055251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         July
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-Jan-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-Mar-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2
8.9e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Off.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              щ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    three
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NID:g902619;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #text_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UNIPROT: Q9WAB3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cucumb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIDN:CAA61802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ala
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UNIPROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           :Q9YJR9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10
10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PID: 9902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inf
```

```
coat protein - cucumber mosaic virus (strain C)
C; Species: cucumber mosaic virus, CMV
C; Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_cl
C; Genetics: Virula 36
R; Title: Nucleotide sequence_revision of the coat protein genes and
A; Molecule type: genomic RNA
A; Molecule type: genomic RNA
A; Molecule type: genomic RNA
A; Cross-references: UNIPROT: P21368; GB:D00462; NID:g222041;
R; Tsunasawa, S.; Narita, K.
J. Biochem. 92, 607-613, 1982
A; Title: Micro-identification of amino-terminal acetylamino
A; Reference number: A61297; MUID:83056735; PMID:6754709
A; Contents: annotation; acetylation
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Accession: S09663
A;Molecule type: mRNA
A;Residues: 1-218 <NOE>
A;Cross-references: UNIPROT:P14767
A;Experimental source: strain I17F
A;Note: this is a revision to the sequence from reference R;Noel, M.J.T.; Tahar, S.B.
Nucleic Acids Res. 17, 10492, 1989
A;Title: Nucleotide sequence of the coat protein gene and A;Reference number: S06932; MUID:90098885; PMID:2602158
A;Accession: S06932
A;Molecule type: mRNA
A;Residues: 1-6,'W',8-44,'W',46-51,'W',53-56,'W',58-68,'W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  coat protein - cucumber mosaic virus (strain C; Species: cucumber mosaic virus, CMV A; Variety: strain I17F
C; Date: 19-Mar-1997 #sequence_revision 19-MarC; Accession: S09663; S06932
R; Noel, M.J.T.; Tahar, S.B.
Nucleic Acids Res. 18, 1332, 1990
A; Title: Corrigendum. Nucleotide sequence of A; Reference number: S09663; MUID: 90206832; PN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Note: the C; Genetics: A; Gene: cp C; Superfami C; Keywords:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
S09663
                                                                                                                                                                                                                                                                                                                      RESUL'
                                                                                                                                                                                                                                                                                                                                                                                              멼
                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Residues: 1-6,'W',8-44,'W',46-51,'W',53-56,'W',58-68,'W',70,'W',72-73,'W',75-A;Cross-references: EMBL:X16386
A;Experimental source: strain I17F
A;Note: this sequence has been revised in reference S09663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query N
Best Lo
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Superfami
                                                                                                                                                                                                                                                                                                                         る立
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                    a, S.; Narita, K.
. 92, 607-613, 1982
icro-identification of amino-terminal acetylamino
e number: A61297; MUID:83056735; PMID:6754709
: annotation; acetylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lly:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14;
                                                                                                                                                                                                                                                                                                                                                                                                                             Η
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
Similarity 100.0%;
.4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                              MDKS
                                                                                                                                                                                                                                                                                                                                                                                                                              MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDKSESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDKSESTSAGRNRR 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997 #sequence_revision 19-Mar-1997 9663; S06932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
larity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                              ESTSAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     revised in virus coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 14;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 14; DB 2;
Pred. No. 8.9e-08;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of the ; PMID: ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 117F)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2; 1
                                                                                                           NID:g222041;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                reference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     coat protein
2320436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #text
                                                                                                                                                                                                                                                                  #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ••
••
                                                                                                                                                                                                                                   J.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S06932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   as
                                                           acids
                                                                                                             PIDN:BAA00357.1;
                                                                                                                                                                                                 flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Thr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                           ב
ב
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -Jul-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             regions
                                                        proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                 regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   င္ပင္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       flanking regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                            PID: g222042
                                                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96,'W'
                                                                                                                                                                                                 cucumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              궃
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ហុ
```

```
RESULT 13

JQ2176
hypothetical 11.5K protein (clone GV-B) - gar
N;Alternate names: hypothetical protein II
C;Species: garlic virus B
C;Date: 30-Sep-1993 #sequence_revision 20-Aug
C;Accession: JQ2176; S27912
R;Sumi, S.; Tsuneyoshi, T.; Furutani, H.
J. Gen. Virol. 74, 1879-1885, 1993
A;Title: Novel rod-shaped viruses isolated fr
A;Reference number: JQ2171; MUID:93389442; PM
A;Accession: JQ2176
A;Residues: 1-108 <SUM>
A;Cross-references: UNIPROT:Q67695; GB:AB0103
R;Sumi, S.I.
submitted to the EMBL Data Library, July 1992
A;Reference number: S27908
A;Accession: S27912
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-108 <SU2>
A;Cross-references: EMBL:D11158; NID:g221432;
C,Superfamily: barley stripe mosaic virus 14K
                                                                                                                                                                                                                                                                                                                                                                                          N;Alternate names: capsid protein
C;Species: cucumber mosaic virus, CMV
C;Date: 03-Aug-1998 #sequence_revision 03-Aug-
C;Accession: D71392
R;McGarvey, P.; Tousignant, M.; Geletka, L.; C
J. Gen. Virol. 76, 2257-2270, 1995
A;Title: The complete sequence of a cucumber m
A;Reference number: A71392; MUID:96005047; PMI
A;Accession: D71392
A;Accession: D71392
A;Cross-references: UNIPROT:Q66120; GB:U20219;
A;Experimental source: strain Ixora
C;Comment: The CMV genome consists of three sp
C;Comment: The Ixora strain in unusual in that
ptoms found when replicated by other CMV strai
C;Genetics:
A;Map position: segment RNA 3
C;Superfamily: cucumber mosaic virus coat protein
F;1/Modified site: acetylated amino end (Met)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
D71392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ははこので
                                                                                                                                                                                                                                                                                                                          श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Map position:
C;Superfamily:
C;Keywords: ace
F;1/Modified si
F;43/Binding si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Best I
Matche
                                                                                                                                                                                                                                                                                                                                                 Query N
Best Lo
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match
                                                                                                                                                                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ion:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ion: segment RNA3
ly: cucumber mosaic virus coat protein
  acetylated amino end; coat protein; g
d site: acetylated amino end (Met) #st
g site: carbohydrate (Asn) (covalent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12
S
                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                           œ
                                                                                                                                                                                                                                                                                                                                                   7 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    85.7%
Similarity 100.0
2; Conservative
                                                                                                                                                                                                                                                                                                     SAGRNRR
||||||
SAGRNRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDKS
                                                                                                                                                                                                                                                                                                                                                 Similarit; Conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDKS:
                                                                                                                                                                                                                                                                                                                                               larity
Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ESTSAGRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3STSAGRN
                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                 50.0
100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                        %0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7%;
                                                                                                                                                                                                                                                                                                                                                             % ··
                                                                                                                                                                                                                                                                                                                                                            ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                            rus coat protein
coat protein
no end (Met) #sta
                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1
                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                 Score 7; DB
Pred. No. 2.
; Mismatches
                                                                                                         GB:AB010301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GB:U20219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ore 12; DB red. No. 1.2 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-Aug-
                                                                                                                                                                                                             20-Aug-
                                                                                                                                                                                                                                                                                                                                                         7;
. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    n that it o
                                                                                                                                                                                                                                            garl
     32;
14K
                                                                                                                                                       from PMID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              er mosaic
PMID:75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٠.
                                                                                                                                                                                                                                                                                                                                                             DB
2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cellini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ixora)
    PIDN:BAA618
protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    n; glycoprotein
#status experiment
nt) #status predict
                                                                                                                                                                                                                                               U.
                                                                                                                                                                                                                                                                                                                                                                                               #sta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998
                                                                                                                                                                                                              19
                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 2e
                                                                                                                                                                                                                                                                                                                                                           ωŅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NID:g116
                                                                                                                                                      garlic,
:8376963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                              94
                                                                                                          GB:D11158
                                                                                                                                                                                                                                                                                                                                                                                                                                                               does
does
                                                                                                                                                                                                                                                                                                                                                                                               tue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              virus
1763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0 0
                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                             #text
                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'म
•
                                                                                                                                                                                                                                                                                                                                                                                            predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                               single-strande not replicate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1916;
                                                                                                                                                                                                                                                                                                                                                  Indels
                  814.
                                                                                                                                                                 Allium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٠.
                                                                                                                                                                                                            _change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _change
                                                                                                                                                                                                                                                                                                                                                                        218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kaper,
                                                                                                          ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                218
                                                                                                          NID:
                ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIDN: AAC54
                  PID:
                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     al
                                                                                                         g282615
                                                                                                                                                                                                              -60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                 ativum,
                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \mathbf{q}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ·.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jul
                g221433
                                                                                                                                                                                                              Jul-200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ed, capped
                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                          ν
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   619
                                                                                                                                                                possessing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                           שי
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                          IDN: BAA61814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ed, po
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q.
                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĬD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ę.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ċ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  )sitivo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ent
                                                                                                                                                                 ģ
```

Search Job tim

ime :

leted: December 22 secs

<u>ა</u>

2004,

08:17:19

```
A; Accession: TA; Accession: TA; Status: prel
A; Status: prel
A; Status: prel
A; Cross-refere
A; Cross-refere
A; Experimental
C; Genetics:
A; Map position
A; Note: F24I3.
C; Superfamily:
                                                                                                                                                                                                                                      hypothetical IC; Species: Ara
C; Species: Ara
C; Date: 20-Apa
C; Accession: 7
R; Nyakatura, C
submitted to t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Graves, M.V
submitted to t
A;Reference nu
A;Accession: ?
A;Status: pred
A;Status: pred
A;Molecule tyn
A;Residues: 1:
A;Cross-refere
A;Experimental
C;Genetics:
A;Note: all9L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
T17609

hypothetical protein al19L - Chlorella virus PBCV-1
C;Species: Chlorella virus PBCV-1
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999
C;Accession: T17609
R;Graves, M.V.; Van Etten, J.L.
Rubmitted to the EMBL Data Library, May 1999
                                                                                                                                                                                                                                                                                                                 RESULT
 g
                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                     S
                                                                                                                                                                                                                              A;Reference
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                Query Naest Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query N
Best Lo
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                     Query
Best I
Matche
                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Loc
                                                                                                                                                                                                                                                                                                                                                                                                                                   Loc
                                                                                                                                                                                                                                                                                                                               15
                                                                                                                                                                                                                                                                                                                                                                                                                        Œ
                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
                                                                           Mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ma
                                                                                                                                                                                                                                                                                                                                                                                                                       Φ
                                                                                                                                                                            preliminary
b type: DNA
s: 1-136 <NYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M.V.; Van Etten, J.L.
to the EMBL Data Library, May 1999
e number: Z18806
n: T17609
preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                 al protein F24I3.190 - Arabidopsis thaliana
Arabidopsis thaliana (mouse-ear cress)
-Apr-2000 #sequence_revision 20-Apr-2000 #ton: T47771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          type: DNA
: 1-133 <GRA>
ferences: UNIPROT:Q84440; EMBL:U42580; NID:g4028896;
ntal source: specific host Chlorella strain NC64A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tch
                                                                                              4I3.190
ily: Arabidopsis
                                                                                                                                                 ferences: UNIPROT:Q9M1I9; EMBL:AL138655
ntal source: cultivar Columbia; BAC clone
                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        191
                                                                                                                           ion:
                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                00
                                                                                                                                                                                                                , G.; Fartmann, B.; Dau
o the Protein Sequence
number: Z24475
: T47771
                                                                                                                                                                                                                                                                                                                                                                                             σ
 ത
                                                42.9%; Score 6; DB 2
Similarity 100.0%; Pred. No. 18;
6; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                    1 42.9%;
Similarity 100.0%;
6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42.9%;
Similarity 100.0%;
6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                              STSAGR 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SESTSA 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SESTSA
                        SESTSA
                                                                                                                                                                                                                                                                                                                                                                     STSAGR 133
SESTSA
                                                                                                                           w
                                                                                                                                                                          <NYA>
 11
                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                 thaliana hypothetical
                                                                                                                                                                                                                                       B.; Dauner, D.;
equence Database,
                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 6; DB 2;
Pred. No. 14;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                Score 6;
                                                                                                                                                                                                                                                                                                                                                                                                                    ore 6; DB 2; red. No. 17; Mismatches
                                                                                                                                                                                                                                        D.; Sterr, W.; Holland, base, February 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                             N
--
                                                                        <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ب</u>
                                                                                                protein
                                                  0;
                                                                         Length 136;
                                                                                                                                                                                                                                                                                                                                                                                                                      0
;:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                #text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                            _change
                                                                                                  F24I3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108;
                                                                                                                                                                                                                                                      R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIDN: AAC96487.1
                                                                                                    190
                                                                                                                                                                                                                                                                                09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,</u>
                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                       Weichselgartner,
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                     Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
```

**≾** ...

~